

# G · E · N · E · S · I · S

**Instant, Freshbrew & B2C (Espresso) Machines**



## **Technical Manual**

**Including Spare Parts Information**

This manual is to be used by authorised personnel involved in installing, commissioning and servicing Genesis instant, double freshbrew and espresso (B2C) table top beverage vending machines. The technical information contained within this document is for information only and may be changed without prior notice. Crane Merchandising Systems accepts no responsibility for any damage caused to the machine through misinterpretation or misuse of the information contained in this document.

Upon receipt, carefully examine the machine checking for any damage or missing/incorrect parts. Any discrepancy must be reported to Crane Merchandising Systems in writing within three working days.

In accordance with the food hygiene regulations and in compliance with local Public Health Authorities, it is the responsibility of the operator to keep the machine in a thoroughly clean condition.

The following symbol is used throughout this Technical Manual:



**Safety First!** Take care, risk of personal injury.

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## Important Safeguards

When installing or servicing the Genesis, always have this manual available for quick and easy reference and always follow these basic safety precautions:

1. Ensure that the machine is situated on a strong horizontal surface (see [Specifications Table](#) page 6), at a convenient height and in a position where it is not likely to be knocked off.
2. The mains lead should never trail from the machine and should always be kept away from hot surfaces and sharp edges.
3. Allow the machine to cool before handling or moving.
4. Ensure that the mains electricity supply is isolated before removing any of the protective panels or undertaking any major servicing. Working on live equipment should only be undertaken when there is no practical alternative.
5. **Important!** Instant and freshbrew machines: Servicing the heater tank. Water in the tank can reach a temperature of approximately 99° C. Water at this temperature can cause severe burns! B2C machines are fitted with a pressurised water system. Under no circumstances should this be dismantled, other than by a fully trained engineer.
6. Never immerse the machine in water, or any other liquid. This machine must not be installed in an area where a water jet may be used. Never use a water jet to clean this machine.
7. In normal operating conditions the machine should not freeze-up. In the unlikely event of the machine freezing, turn off the mains water supply, disconnect the machine from the mains electricity supply and contact Crane Merchandising Systems for assistance.
8. Ensure that you are conversant with the 'Health and Safety at Work and Electricity at Work Regulations 1989'.



**ALWAYS DISCONNECT THE MACHINE FROM THE MAINS ELECTRICITY SUPPLY BEFORE CLEANING AND SERVICING.**

This machine is for indoor use only and because it is a beverage machine, should be sited in a clean, hygienic area.

It is the policy of Crane Merchandising Systems (CMS) to continue developing its range of beverage equipment. The information presented within this document is for information only and may be changed without prior notice. Crane Merchandising Systems accepts no responsibility for damage caused to the equipment through misinterpretation or misuse of the information contained in this manual.

## Section 1 - Machine Specifications

### 1.1 Specifications Table

	Instant & Freshbrew	B2C	B2C/Teapot
Height	750 mm	860 mm*	860 mm*
Depth	590 mm	590 mm	590 mm
Width	540 mm	540 mm	540 mm
Weight	70 kg	70 kg	70 kg
Cup Capacity	220	220	220
Number of Canisters	7 - Instant / 6 - Freshbrew	5 + bean container	6 + bean container
Electrical Requirements (i) Voltage (ii) Current (iii) Frequency	220 - 240V ac 13 Amp fused 50Hz		
Water Services (i) Pressure (ii) Stopcock	200 Kpa (2 Bar) - 600 Kpa (6 Bar) 15 mm BSP from rising main		

\* Height includes visible bean container.

All weights and dimensions are approximate and are for guidance only.

### 1.2 Canister Capacities (Approximate)

Ingredients	Machines			
	Instant	Freshbrew	B2C	B2C/Teapot
Coffee Beans			1.8 kg - 240 cups	
Freshbrew Coffee			0.55 kg - 130 cups	
Freshbrew Coffee		1.8 kg - 240 cups		
Freshbrew Tea		0.73 kg - 200 cups		0.82 kg - 248 cups
Instant Coffee	0.67 kg - 420 cups			
Instant Tea	0.365 kg - 830 cups			
Chocolate	2.25 kg - 130 cups			1.34 kg - 67 cups
Milk/Topping	1.4 kg - 180 cups			1.16 kg - 145 cups
Soup	2.25 kg - 270 cups			
Sugar	2.8 kg - 1075 cups			1.51 kg - 581 cups

### 1.3 Water Filter

Genesis machines fitted with a paperless freshbrew brewer or **CoEx®** espresso brewer must be connected to the water supply via a scale inhibiting water filter. CMS recommend and supply the **Brita AquaQuell Compact** water filter.



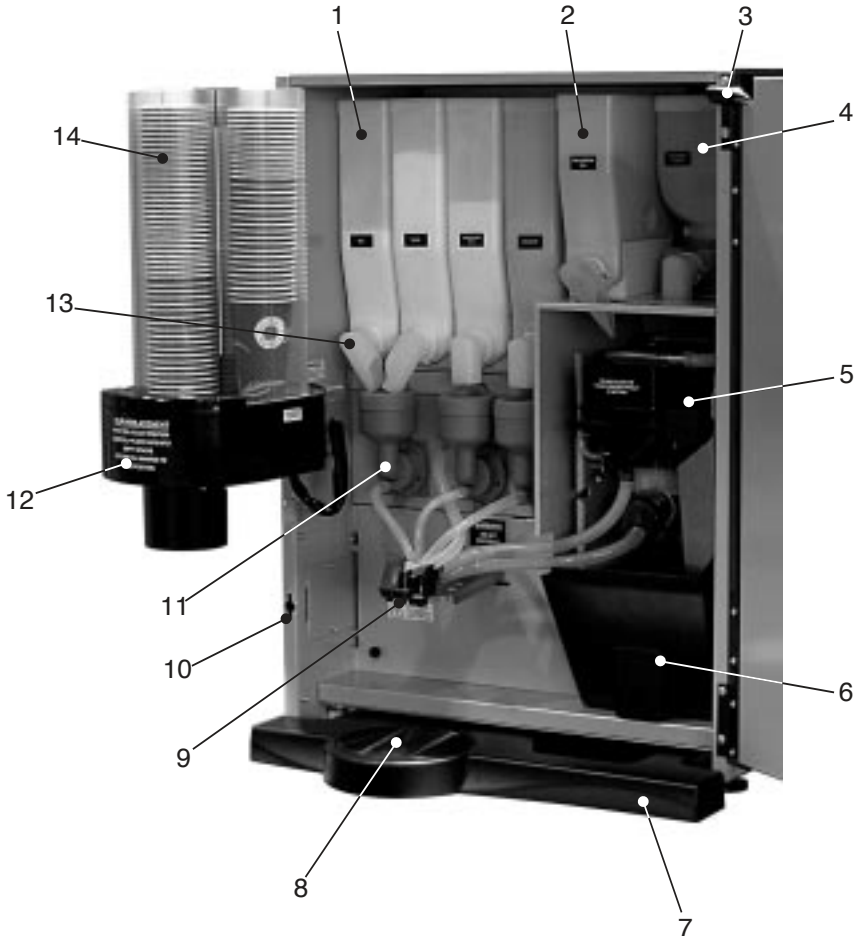
## 1.4 External Features



### Key:

- |                           |                  |
|---------------------------|------------------|
| 1. Coin Entry             | 6. Coin Return   |
| 2. Coin Reject Button     | 7. Foot          |
| 3. LCD Display            | 8. Door Lock     |
| 4. Drink Selection Keypad | 9. Graphic Panel |
| 5. Selection Decals       | 10. Door         |

## 1.5 Internal Features



**N.B.** Photograph shows Genesis double freshbrew machine

### Key:

- |                                |                         |
|--------------------------------|-------------------------|
| 1. Instant Ingredient Canister | 8. Waste Tray Grille    |
| 2. Freshbrew Tea Canister      | 9. Moving Dispense Head |
| 3. Main Loom                   | 10. Door Switch         |
| 4. Freshbrew Coffee Canister   | 11. Mixing System       |
| 5. Paperless Dual Brewer       | 12. Cup Drop Unit       |
| 6. Brewer Waste Bucket         | 13. Canister Outlet     |
| 7. Waste Tray                  | 14. Cup Turret          |

# 1.6 Drinks Choice (Instant Machines)

## Ingredients:

### Option 1 - 7 Canisters

1. Milk
2. Sugar
3. Cappuccino Topping
4. Chocolate
5. Instant Tea
6. Instant Coffee
7. Instant Decaf. Coffee

### Option 2 - 7 Canisters

1. Milk
2. Sugar
3. Cappuccino Topping
4. Chocolate
5. Instant Tea
6. Instant Coffee
7. Soup



Genesis - Instant Option 1

Drink Selections	Option 1 7 Canisters	Option 2 7 Canisters
Instant Coffee	●	●
Instant Coffee Decaf	●	
Instant Tea	●	●
Chocolate	●	●
Cappuccino	●	●
Caffe Mocha	●	●
Caffe Latte	●	●
Chocomilk	●	●
Hot Milk Flavour	●	●
Espresso	●	●
Soup		●
Hot Water	●	●

## 1.7 Drinks Choice (Freshbrew Machines)

### Ingredients:

#### Option 1 - 6 Canisters

1. Milk
2. Sugar
3. Cappuccino Topping
4. Chocolate
5. Freshbrew Tea
6. Freshbrew Coffee

#### Option 2 - 6 Canisters

1. Milk
2. Sugar
3. Instant/Decaf. Coffee
4. Chocolate
5. Freshbrew Tea
6. Freshbrew Coffee



**Option 1:** All speciality drinks made with freshbrew coffee. Cappuccino made with cappuccino topping.

**Option 2:** Cappuccino made with coffee, milk and chocolate.

Drink Selections	Option 1 6 Canisters	Option 2 6 Canisters
Freshbrew Coffee	●	●
Instant/Decaf. Coffee		●
Freshbrew Tea	●	●
Chocolate	●	●
Cappuccino	●	●
Caffe Mocha	●	●
Caffe Latte	●	●
Chocomilk	●	●
Hot Milk Flavour	●	
Espresso	●	●
Hot Water	●	●

# 1.8 Drinks Choice (B2C Machines)

**Ingredients:**

- 6 Canisters
- 1. Milk
- 2. Sugar
- 3. Cappuccino Topping
- 4. Chocolate
- 5. Freshbrew Coffee
- 6. Coffee Beans



**Espresso:** All speciality drinks made with freshly ground coffee beans and cappuccino topping.

Drink Selections	B2C 6 Canisters
Fresh Ground Coffee	●
Freshbrew Coffee	●
Chocolate	●
Cappuccino	●
Caffe Mocha	●
Caffe Latte	●
Espresso	●
Double Espresso	●
Americano	●
Chocomilk	●
Hot Water	●

## 1.9 Drinks Choice (B2C & Teapot Machines)

### Ingredients:

- 7 Canisters
- 1. Milk
- 2. Sugar
- 3. Cappuccino Topping
- 4. Chocolate
- 5. Freshbrew Tea
- 6. Freshbrew Coffee
- 7. Coffee Beans



**Espresso:** All speciality drinks made with freshly ground coffee beans and cappuccino topping.

Drink Selections	B2C & Teapot 7 Canisters
Fresh Ground Coffee	●
Freshbrew Coffee	●
Freshbrew Tea	●
Chocolate	●
Cappuccino	●
Caffe Mocha	●
Caffe Latte	●
Espresso	●
Double Espresso	●
Americano	●
Chocomilk	●
Hot Water	●

## Section 2 - Installation Procedure



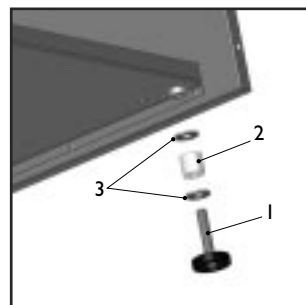
**Important!** It is essential that personnel responsible for installing, commissioning and servicing the machine understand the following:

1. The installation and commissioning of the machine should only be carried out by trained and authorised service engineers.
2. All water and electrical services must be correctly and safely connected.
3. All covers should be replaced correctly and securely and the machine left in a safe condition.

### 2.1 Locating the Machine

1. The machine is suitable for indoor use only, sited in an area with a recommended ambient temperature not below 10° C and not exceeding 30° C. The machine should be located near the appropriate water and electrical services as detailed in the specification table.
2. Prior to moving the machine to its location, ensure that there is sufficient access space available via passageways, stairs, lifts, etc and that the table/counter where the machine is to be located is strong enough to safely support its weight. (Refer to Specifications Table).
3. To ensure adequate ventilation, 100 - 150 mm (4 - 6 inches) clearance must be allowed between the back of the cabinet and the wall.
4. Open the cabinet door using the key provided. Remove all transit packing and the installation kit from the machine. Check for visual signs of damage which may have occurred during transit. If the machine is damaged or any parts are missing, you must contact the supplier immediately.
5. Referring to the diagram opposite, fit the four feet (1) to the machine. Ensure that the spacer (2) is fitted between the washers (3) as shown. Using a 12 mm spanner, adjust the feet until the machine is levelled in both front to back and side to side planes.

Ensure that the door opens and closes easily.



## 2.2 Connecting the Water Supply

1. The machine should be situated within 1 metre of a drinking water supply from a rising main, terminating with a W.R.C. approved 15mm compression stop-tap.
2. The water supply should comply with both the Statutory Instrument No.1147 - "Water, England and Wales" and The Water Supply (Water Quality) Regulations 1989. Water pressure at the stop-tap must be within the limits 2 - 6 Bar (200 Kpa - 600 Kpa) or as specified by the filter manufacturer when a water filter is fitted.
3. Connect the flexi-hose supplied with the machine to the stopcock ensuring that the seal supplied is fitted correctly. Flush the system (several gallons) before connecting the machine.
4. Connect the hose to the inlet valve located on the rear of the machine. Ensure that the seal is correctly fitted. Ensure that all water supply fittings are tight.
5. **Freshbrew & B2C Machines:** Genesis machines fitted with a CoEx® brewer must be connected to the water supply via a water filter. This filter must be of food grade quality and able to remove temporary hardness (scale), heavy metals (lead, copper, iron, cadmium), chlorine and any organic pollutant's/dischlorination. Crane Merchandising Systems recommend and supply the **Brita AquaQuell Compact** water filter.

**Note!** If the machine is connected to the water supply and used without a water filter as specified above, the warranty will be void.

 **BRITA®**  
it's clear from the taste

6. Turn on the water supply at the stop tap and check for leaks. Prime the water filter (where fitted) following the instructions supplied by the filter manufacturer.

## 2.3 Connecting the Electricity Supply



**Safety First!** The machine **must** be earthed. On no account should it be earthed **only** to the water supply pipe.

The machine must be connected to a 230 Volt 50Hz 13 amp fused switched socket outlet, installed to the latest edition of the IEE regulations, using a 3 pin BS approved 13 amp fused plug.

**Important!** If the mains lead becomes damaged in any way it must be replaced by a special lead available from the manufacturer.



## 2.4 Commissioning Procedure

The following procedure must be carried out by a trained installation engineer before the machine can be used for the first time.

1. Ensure that the electrical and water services to the machine are connected correctly and turned on. Ensure that the waste tray is fitted correctly to the machine. Open the front door of the machine and swing the cup turret assembly out of the machine.
2. **All Machines:** Rotate soluble ingredient canister outlets to upright position and remove the canisters - **DO NOT** place ingredient canisters on the floor. Remove the canister lids.

Fill the canisters with the correct ingredients, re-fit the lids and re-fit canisters into machine ensuring that they are returned to their correct positions. Rotate the canister outlets to their correct operating positions.

**Freshbrew Machines:** Fill freshbrew ingredient canisters with freshbrew tea and coffee ingredient and refit to machine.

**B2C Machines:** Release the clips securing the bean container cover as shown in the photograph. Carefully lift the cover from the container. **DO NOT** place the cover on the floor.

Fill the container with fresh coffee beans. The container has a capacity of approximately 1.8 kgs. Refit the cover ensuring that the clips are located correctly.



**N.B.** To maintain optimum drink quality, Crane Merchandising Systems recommend that the bean container is replenished on a daily basis.

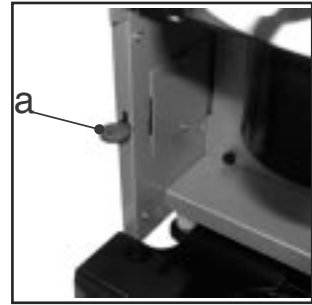
3. Fill the cup turret tubes with the correct size cups for the type of cup catcher fitted to the machine. Allow the cups to drop into the tubes directly from the packaging. **DO NOT TOUCH THE CUPS WITH YOUR HANDS.**

**Important!** Do not fill the tube directly above the cup dispense position. Allow the cup turret motor to rotate a full tube to the cup dispense position. Rotating the cup turret by hand will damage the mechanism.



**Note:** If paper cups are being loaded, each pack of cups must first be inspected for damage to the cup rims. Damaged cups **must not** be used.

4. Insert the safety key (a) supplied with the machine into the door switch as shown. The machine is now **on**, and the water valve open. The cup turret mechanism will index the first available full cup stack to the dispense position and drop the cup stack into the cup drop mechanism. Fill the remaining empty cup stack with cups.



While the machine is powering up, the LCD will display the message as shown opposite, indicating that the water in the boiler is being heated.

**Sorry Out of Service  
Water Tank  
Heating**

5. **Instant & Freshbrew machines:** As heater tank fills and heats, ensure that no water overflows from overflow pipe into the waste tray. Check the system for leaks.
6. **B2C Machines:** The machine will pump approximately 400ml of water through the system which will be heated to operating temperature. Ensure that a suitable container is placed under the dispense head. Remove the container and empty the contents before proceeding.



**Important!** Should the machine fail to fill correctly or leak, turn off the stopcock and the power to the machine before investigating the fault.

7. **B2C Machines:** On the initial setup the message opposite is displayed on the LCD screen. It indicates that the CoEx® brewer has not been setup, only a trained technician can setup the CoEx® brewer. If the CoEx® brewer has been setup this message disappears after ten seconds.

**CoEx® Setup  
Required**

8. To complete the CoEx® setup procedure, enter the **Main Menu**, select **Product Configuration** and select the **CoEx Setup** option.
9. The first two menu options, **Grinder** and **Auger Calibration**, must be completed before bean to cup and freshbrew drinks can be selected.

These two procedures are used to setup the bean to cup grinder and the freshbrew auger. The procedures are the same for both and can be run consecutively:

**Grinder Calibration** (see page 42).

**Auger Calibration** (see page 43).

10. The third option **CoEx Cleaning** on the **CoEx Setup** menu must also be completed.

This procedure ensures the Co-Ex brewer is cleaned at regular intervals. A 'Cleaning Required' message is displayed after seven days, if the brewer is still not cleaned after 10 days bean to cup and freshbrew drinks cannot be selected. This initial clean starts the cleaning routine ten day cycle.

- a. Ensure that the **Time and Date** are correctly setup (see page 49).
  - b. From the **Co-Ex Cleaning** menu select **Perform Co-Ex Clean**.
  - c. Follow the on screen instructions to clean the brewer. These instructions perform the same tablet clean procedure as initiated by button 11 on the Service Keypad.
  - d. When the cleaning cycle is complete exit the engineers program and power down and then power up the machine. This initialises the CoEx Setup procedure.
11. At step 7 above the CoEx Setup Required message will display for 10 seconds and then dissappear, enabling you to proceed with the installation of the machine.
12. Replace the turret lid and swing the cup turret assembly back to its operating position. Ensure that the unit is held securely by the magnetic catch.
- 13.. Check the LCD display on the front of the machine to ensure that the water has heated to the correct temperature and that the machine is in standby mode. A machine set to free vend mode will alternate the messages:

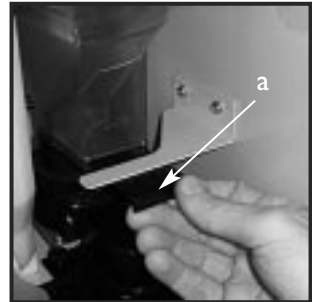
**Please Make  
a Selection**

**No Money Required**

**N.B.** Messages displayed in standby mode will change depending upon the monetary device fitted and set up during programming.

14. Ensure that the cup drop mechanism operates correctly. Press the **Cup Test** (button 7), located in the **Service Keypad** (see page 69) on the rear of the door and ensure that a cup is ejected cleanly from the cup drop unit.
15. Ensure that the dispense head mechanism operates correctly. Press the **Park Head** (button 8), located in the **Service Keypad** (see page 69) on the rear of the door and ensure that the dispense head moves to its fully extended position. Press the button again to return the dispense head to its correct (homed) position.
16. **Freshbrew Machines:** Ensure the brewer guard and brewer waste container are fitted correctly. Slide the container into position directly under the brewer with its lip outside the brewer cover.
17. **B2C Machines:** Pull the bean canister shut-off (a) to its fully extended position as shown in the photograph.

Ensure that the brewer waste container is fitted correctly beneath the CoEx® brewer unit.



18. If fitted, check that the coin mechanism and cash box operate correctly. Fill the coin tubes with correct coinage. Ensure coin return mechanism functions correctly.
19. Operate the machine through its complete range of selections to ensure that each vend is correctly dispensed. Follow the instructions for making a vend using the **Test Vend** (button 6) located on the **Service Keypad** (see page 69).
20. Remove the safety key and close the cabinet door. Ensure that the machine is left in a clean and safe condition.
21. **Warranty card:** Please complete and return the warranty card that comes with the machine. Use the card to note any problems you encountered during installation, your feedback helps us to improve our products and services. Return the warranty card, whether problems were encountered or not, failure to may invalidate your warranty.

## Section 3 - Programming Mode

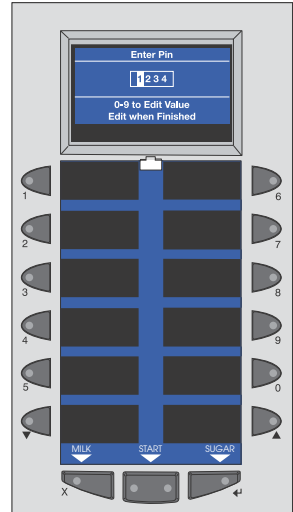
### 3.1 Drink Selection Keypad

Programming mode utilises the drink selection keypad, as defined in the illustration below, and allows the engineer to view and alter stored data within the machines memory. During programming the keys are used as follows:

**Keys 0-9** Used for entering numerical data

- ▲ For indexing up in a program, or incrementing data
- ▼ For indexing down in a program, or incrementing data
- ↵ (Edit) Used to select and enter the highlighted menu and to save data to machines memory
- X (Exit) To return to the previous menu screen

**START** Press to 'set all' or 'clear all' data or begin a test sequence.



### 3.2 Menu Display

The **Genesis** features an interactive menu display. The multi line LCD display helps to make navigating the programming menu structure easy and intuitive. It is used to display programming information and will change according to the type of data being updated.

- The top line of the screen is the Menu title.
- Selected items are highlighted in white. Press the ▲(up) or ▼(down) keys on the drink selection keypad to highlight an item.
- Press the ↵ (Edit) key to select the item. In this example, pressing the ↵ (Edit) key will display the **Mug Discount** screen.
- The bottom line of the screen will often show important information. In certain configuration menus it will display the current value for the selected item. In the example shown the screen is showing that the current **Mug Discount** is set at £ 0.05. This is a useful way to quickly check stored settings and also confirm that a value has been altered correctly.

Price	
Individual Prices	▲
Entire Machine	
Mug Discount	
View High/Low Price	▼
=£ 0.05	

5. To return to the **Main Menu** from any screen, simply press the **X** (Exit) key until you reach the **Main Menu**.

### 3.3 Accessing the Programming Mode

1. Open the front door of the machine and insert the safety key to restore power to the machine. The machine is now **on**.
2. Press the **Program Entry** (button 1) on the **service keypad** (see page 69), located inside the door. The LCD will display the screen as shown opposite. Enter the 4 digit engineers entry pin code using the drink selection keypad.

Enter Pin
1 2 3 4
0-9 to Edit Value Edit when Finished

**N.B.** The factory default code is entered by pressing the sequence 1-1-1-1. You may be issued with your own personalised code.

3. Press the **↓** (Edit) key. Providing the engineer has entered the code correctly, the LCD will display the screen as shown opposite.

Enter Pin
Engineer Program Granted
Edit to Continue, or EXIT

Press the **↓** (Edit) key to access the engineers program or **X** (Exit) key to return the machine to standby mode.

4. The LCD on the front of the machine will display the top level programming menu screen - **Main Menu**. The first available menu **Data Recall** is highlighted indicating that it can be selected. To move to a different menu press the **▲** (up) or **▼** (down) keys on the drink selection keypad until the required menu is highlighted.
5. With the required menu highlighted, press the **↓** (Edit) key to select it. Using the **Price** menu as an example, the LCD will display the sub menus as shown opposite.

Main Menu	
Data Recall	▲
Diagnostic Test	
Price	
Product Configuration	▼
Press EDIT to Select	
Free Vend	
System Settings	
Security Codes	
Timed Events	

Price	
Individual Prices	▲
Entire Machine	
Mug Discount	
View High/Low Price	▼
Press EDIT to Select	

6. Using the ▲ (up) or ▼ (down) keys, the ⏴ (Edit) key and the ✕ (Exit) key it is possible to easily navigate through all of the menus contained within the Engineers Program.
7. To update numerical data, key in the actual digits of the number required using the selection keys 0-9. Once the correct parameter has been entered, press the ⏴ (Edit) key to overwrite the previous value and save the new parameter in the machines memory. Pressing the ✕ (Exit) key will move back to the previous screen.

Certain programming functions require that the engineer chooses either one or multiple parameters within a sub program. These can take the form of either **Check Boxes** or **Radio Buttons**.

8. **Check Boxes:** The example opposite shows the **Days of Week** screen accessed via the **Sanitation Events** Menu which allows the engineer to choose multiple days of the week on which a specific function will take place.

9. Using the ▲ (up) or ▼ (down) keys, scroll through until the required day is highlighted as shown. Pressing the ⏴ (Edit) key will select the day, indicated by an X appearing in its adjacent box.

Continue until all required days have been selected. Pressing the ✕ (Exit) key will move back to the previous screen and save the new settings to the machines memory.

**N.B.** Pressing the **START** key on the drink selection keypad will check all boxes if empty or clear all boxes if checked.

10. **Radio Buttons:** The example opposite shows the **State** screen accessed via the **Timed Events Menu** which requires the engineer to select one of the options shown. Use the ▲ (up) or ▼ (down) keys to set the required option followed by the ⏴ (Edit) key to store/save it (indicated by the filled radio button).

All operator programming for the Genesis range follows the procedures as described above. Specific program actions are described fully in the following section.

## Section 4 - Engineers Program

To access the Engineers Program, enter the programming mode as described in Section 3. Once in the Engineers Program the LCD on the front of the machine will display the top level programming menu screen - Main Menu.

**N.B.** Coins In/Out will only be displayed on machines fitted with an MDB coin mech.

Main Menu	
Data Recall	▲
Diagnostics	
Test	
Price	
Product Configuration	▼
Press EDIT to Select	
Free Vend	
Coins In/Out	
System Settings	
Security Codes	
Timed Events	

Using the ▲ (up) or ▼ (down) keys, ↵ (Edit) key and ✕ (Exit) key on the drink selection keypad the engineer can navigate quickly and easily through the engineers program menus as described in Section 3 - [Programming Mode](#) (see page 18).

### 4.1 Data Recall Menu

Entry into this menu allows the engineer to view Non-Resettable and Resettable Sales Data, view data relating to Timed Events and Identification Numbers of installed components and (if feature enabled) view SureVend™ assisted vend information. The Resettable Sales Data and SureVend™ data menus contain an extra sub-menu which allows the engineer to delete the current data from the machines memory.

Data Recall	
Non Resettable Sales Data	▲
Resettable Sales Data	
Timed Events	
Identification Numbers	
SureVend	▼
Press EDIT to Select	

#### 4.1.1 Non Resettable Sales Data

This menu allows the engineer to view and record monetary and sales values. This data cannot be reset and will remain intact for the service life of the controller board (unless the back-up battery is removed).

1. From the Data Recall screen highlight Non Resettable Sales Data and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. From this menu the engineer can view data for the Overall Totals (highlighted), By Product, along with data relating to Cash, Cashless and Token Vends.

Non Resettable Sales Data	
Overall Totals	▲
By Product	
Cash	
Cashless	
Token	▼
Press EDIT to Select	

2. To view the Overall Totals screen, press the ↵ (Edit) key on the drink selection keypad. This menu displays both the total £ amount and total vend counts for the following data:



Data Fields on the Overall Totals screen:

<b>Sales-£</b>	Displays the total machine sales in £
<b>Sales-#</b>	Displays the total number of machine vends. This value includes normal, discount and surcharge vend totals.
<b>Discount-£</b>	Displays the total monetary value of all discounts in £
<b>Discount-#</b>	Displays the total number of discounted vends
<b>Test Vend-£</b>	Displays the total monetary value of all test vends in £
<b>Test Vend-#</b>	Displays the total number of test vends
<b>Surcharge-£</b>	Displays the total monetary value of all surcharges in £
<b>Surcharge-#</b>	Displays the total number of surcharge vends
<b>Free Vend-£</b>	Displays the total monetary value of all free vends in £
<b>Free Vend-#</b>	Displays the total number of free vends

**N.B.** All sales data is presented in a format required by the latest European Vending Association Data Transfer Standards (EVA DTS). Surcharge data fields are not supported by Crane machines.

3. Scroll through the list displayed using the ▲ (up) or ▼ (down) keys on the front panel and record the audit data.

When complete, press the ✕ (Exit) key on the drink selection keypad to return to the Non Resettable Sales Data menu screen.

Overall Totals		
Sales-£	0.00	▲
Sales-#	0	
Discounts-£	0.00	
Discounts-#	0	
Test Vend-£	0.00	▼
Test Vend-#	0	
Surcharge-£	0.00	
Surcharge-#	0	
Free Vend-£	0.00	
Free Vend-#	0	

4. The engineer can also view and record audit data by individual product. Press the ▼ (down) key on the drink selection keypad to highlight By Product on the Non Resettable Sales Data menu screen.
5. Press the ↵ (Edit) key on the keypad to enter the By Product menu screen. This menu contains all of the drink selections available from the machine. Use the ▲ (up) or ▼ (down) keys on the drink selection keypad to scroll through the menu until the required selection is highlighted.
6. Press the ↵ (Edit) key on the keypad to enter the highlighted selection e.g. chocolate. The LCD will display the screen as shown opposite. This menu displays both the total £ amount and total vend count as previously described.

**N.B.** Individual By Product screens also display the price set for the selection as shown.

Chocolate		
Price-£	0.00	▲
Sales-£	0.00	
Sales-#	0	
Discounts-£	0.00	
Discounts-#	0	▼
Surcharge-£	0.00	
Surcharge-#	0	
Free Vend-£	0.00	
Free Vend-#	0	

The engineer can then scroll through the list displayed using the ▲ (up) or ▼ (down) keys on the drink selection keypad and record the audit data.

7. When complete, press the **X** (Exit) key on the drink selection keypad to return the machine to the previous screen. The engineer can then view data for more selections using the procedure described above and also access further menus via the Non Resettable Sales Data menu relating to Cash, Cashless and Token audit data.
8. To return the machine to standby mode, press the **X** (Exit) key repeatedly until the LCD displays the standby screen.

#### 4.1.2 Resettable Sales Data

This menu contains similar data to that available from the Non Resettable Sales Data menu. However, once viewed and recorded, data from this menu can be cleared from the machines memory.

1. From the Data Recall screen, highlight Resettable Sales Data and press the ↵ (Edit) key. The LCD will display the screen as shown opposite and allow the engineer to view data for all parameters as described for Non-Resettable Sales Data. Additionally the menu allows the engineer to delete all resettable data via the Clear Data menu.

Resettable Sales Data	
Overall Totals	▲
By Product	
Cash	
Cashless	
Token	▼
Press EDIT to Select	
Clear Data	

2. To view the Overall Totals screen, press the ↵ (Edit) key on the drink selection keypad. This menu displays both the total £ amount and total vend count (since the last time it was cleared) for the data fields shown.

Overall Totals	
Sales-£	0.00 ▲
Sales-#	0
Discounts-£	0.00
Discounts-#	0
Test Vend-£	0.00 ▼
Test Vend-#	0
Surcharge-£	0.00
Surcharge-#	0
Free Vend-£	0.00
Free Vend-#	0

**N.B.** See [Data Fields](#) (see page 23) for detailed descriptions of these fields.

3. Scroll through the list displayed using the ▲ (up) and ▼ (down) keys on the front panel and record the audit data. When complete, press the **X** (Exit) key on the drink selection keypad to return to the Resettable Sales Data menu screen.
4. The engineer can also view and record resettable monetary and vend data for individual product by entering the By Product menu, and also view and record data relating to Cash, Cashless and Token vends using their relevant sub-menus.

Once the engineer has viewed and recorded required information from these sub-menu's, the data can be deleted via the Clear Data sub menu.

- From the Resettable Sales Data screen, highlight the Clear Data sub menu using the ▼ (down) key and press the ↵ (Edit) key. The LCD on the front of the machine will display the screen as shown opposite, warning the engineer that all data will be deleted.

Clear Data	
Are you sur e you want to set all resett able data to zero ?	
CANCEL - EXIT	OK - EDIT

Either press the ↵ (Edit) key to clear the data or press the ✕ (Exit) key to exit the menu without clearing the data.

#### 4.1.3 Timed Events

- From the Data Recall menu scroll down and highlight Timed Events then press the ↵ (Edit) key. The LCD will display the screen as shown opposite. From this menu screen the engineer can access then view and record information relating to the four events as shown.

Timed Events	
Power Losses	▲
Last Data Clear	
Last Vend	
Last Clock Set	▼

- To view the Power Losses screen, press the ↵ (Edit) key. The screen displays a list of the 10 most recent occasions when power to the machine has been disconnected in date, time of day and period format. Press the ✕ (Exit) key to return to the Timed Events menu.

Power Losses			
05-08-05	12:25	10Min	▲
04-08-05	12:10	12Min	
			▼

- Press the ▼ (down) key to highlight Last Data Clear, Last Vend and Last Clock Set. Information for these events is displayed along the bottom of the screen.

#### 4.1.4 Identification Numbers

- From the Data Recall menu scroll down and highlight Identification Numbers then press the ↵ (Edit) key. The LCD will display the screen as shown opposite. From this menu the engineer can access and then view serial number, part number and version type information relating to the main PCB and any MDB coin/card mechanism fitted to the machine.

Identification Numbers	
Main PCB	▲
Coin Mechanism	
Bill Validator	
Card Reader	▼

**N.B.** Coin Mechanism, Bill Validator and Card Reader will only be displayed if an MDB device is fitted to the machine.

#### 4.1.5 SureVend™

This menu becomes available when SureVend™ is enabled via the [Product Configuration menu](#) (see page 34).

1. From the Data Recall menu scroll down and highlight SureVend™ then press the ↵ (Edit) key. The LCD will display the screen as shown opposite. From this menu screen the engineer can view and record the number of cup drop failures that SureVend™ has logged and the number of SureVend™ assisted vends.
2. Once the data has viewed and recorded it can be cleared using Clear Data. The [Clear Data screen](#) confirmation screen is displayed (see page 25).

SureVend	
Cup Drop Failures 1-#	▲
SV Assisted-#	
Clear Data	▼

#### 4.1.6 Mug Vends

This menu displays the number of vends that the machine has made without dropping a cup. Once the engineer has viewed and recorded the data it can be cleared via the [Clear Data menu](#) (see page 25).

Mug Vends	
Mug Vends-#	15 ▲
Clear Data	▼

#### 4.1.7 Print Data

This menu displays the data that can be extracted from the machine when a printer is connected and the corresponding keypad number which needs to be pressed to send the data to the printer. For more information regarding this see [Data Transfer Standard \(DTS\)](#) (see page 56).

Print Data	
Press	Data Type
1	All Data
2	Overall Totals
3	By Product
4	Cash

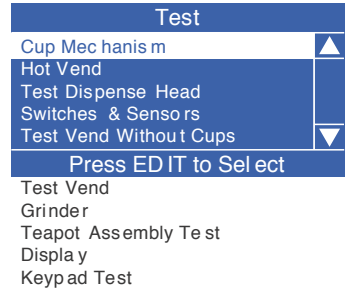
## 4.2 Diagnostic Menu

1. Should a fault occur within the machine, the LCD will display a fault message and in some cases the machine may become inoperable. The Diagnostic menu displays error messages relating to faults that may occur, enabling the engineer to easily locate and repair the problem, bringing the machine quickly back into service.
2. Tables detailing the error messages displayed on the LCD, diagnostic messages displayed via this menu and fault descriptions are included in Section 12 - [Diagnostics and Maintenance Procedures](#) (see page 118).

## 4.3 Test Menu

This menu allows the engineer to test individual components and switch inputs to ensure correct operation. On entry into the Test menu the LCD will display the screen as shown.

**N.B.** The Grinder and Teapot Assembly Test options are only displayed on espresso machines.



### 4.3.1 Cup Mechanism

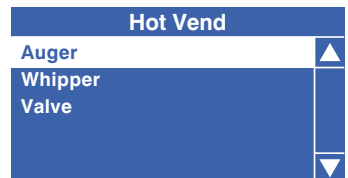
This sub menu allows the engineer to test the operation of the cup drop unit and replicates the function of the Cup Test (button 7) on the Service Keypad (see page 69).

1. Press the ↵ (Edit) key twice to display the test screen followed by the START button on the drink selection keypad. The cup drop unit will dispense a cup indicated by the screen opposite.
2. Pressing the X (Exit) key twice will return to the main test menu screen.



### 4.3.2 Hot Vend

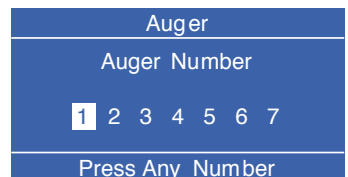
Upon entry into this menu the LCD will display the screen as shown. From this menu screen the engineer can test for the correct of auger and whipper motors along with the dispense valves fitted to the heater tank.



**Auger:** This sub menu allows the engineer to test for correct operation of each individual ingredient motor fitted to the machine. Press the ↵ (Edit) key to display the test screen which indicates the number of motors fitted to the machine.

**N.B.** Testing the ingredient motor causes the ingredient canister auger to turn. Remove canisters before carrying out this test sequence. DO NOT place ingredient canisters on the floor. Refit correctly after carrying out the test.

1. To test an ingredient motor, e.g. number 1, press the corresponding button on the drink selection keypad. The selection will be highlighted as shown and the motor will operate for 3 seconds. Repeat this operation to test additional ingredient motors.



2. Press the **X** (Exit) key to return to the main test menu screen.

**Whipper:** This sub menu allows the engineer to test for correct operation of each individual whipper assembly fitted to the machine. Press the ↵ (Edit) key to display the test screen which indicates the number of whippers fitted to the machine.

1. To test a whipper, press the corresponding button on the drink selection keypad. The selection will be highlighted as shown and the whipper will run for 3 seconds. Repeat this operation to test additional whipper units.

Whipper					
Whipper N umber					
1	2	3	4	5	
Press Any Number					

2. Press the **X** (Exit) key to return to the main test menu screen.

**Valve:** This sub menu allows the engineer to test for correct operation of each individual dispense valve fitted to the heater tank. Press the ↵ (Edit) key to display the test screen which indicates the number of valves fitted to the tank. The dispense head will also move to its fully extended position.

**N.B.** Water will be dispensed from the heater tank during the test sequence. Place a suitable container under the dispense position. Keep hands away from the dispense area while the test is in operation.

1. To test a valve, e.g. number 4, press the corresponding button on the drink selection keypad. The selection will be highlighted as shown and the valve will operate for 4 seconds. Repeat this operation to test additional valves.

Valve					
Valve Numbe r					
1	2	3	4	5	6
Press Any Number					

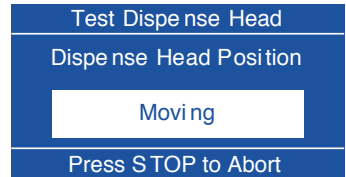
2. Press the **X** (Exit) key to return to the main test menu screen. The dispense head will return to its home position. Empty the contents of the container.

**Important!** After carrying out the valve test on a freshbrew selection the engineer must run the brewer using the **Brewer Open** (button 2) (see page 69).

### 4.3.3 Test Dispense Head

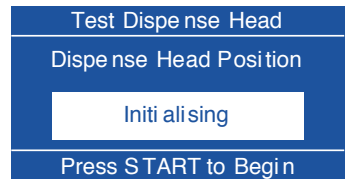
This sub menu allows the engineer to test the operation of the dispense head mechanism.

1. Press the ↵ (Edit) key to display the test screen followed by the START/? button on the drink selection keypad. The dispense head mechanism will move to its first dispense position indicated by the screen opposite.



2. When the head reaches its first dispense position, it will stop and the LCD screen will show the message **Dispense Head Position - Extended**. Press the START/? key a second time to move the head to its second dispense position. Press the START/? key again to move the head to its fully extended dispense position.

3. To return the dispense head to its “home” position and complete the test, press the START/? key. The dispense head mechanism will return to its rest position as indicated by the screen opposite.

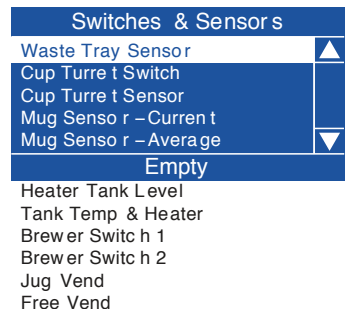


4. When the head reaches its “home” position, it will stop and the LCD screen will show the message **Dispense Head Position - Idle** indicating that the test has been completed successfully. Press the X (Exit) key to return to the main test menu screen.

### 4.3.4 Switches & Sensors

This sub menu displays the switches/sensors that can be tested. For most of the items displayed the status line at the bottom of the screen indicates the current state of the highlighted sensor/switch. In the example opposite, the status line indicates that the **Waste Bucket Sensor** is detecting that the waste bucket is empty.

**N.B.** The Brewer Switch 1 menu will only be displayed on freshbrew models, whilst the Brewer Switch 2 will only be displayed on Espresso machines with teapot brewer.



Press the ▲ (up) or ▼ (down) keys to highlight the other switch/sensor inputs and view their status.

**Mug Sensor - Current:** This menu gives the engineer an indication as to the efficiency of the SureVend™ sensor. The range for correct operation is a numerical value between 51 - 255.

1. Highlight Mug Sensor - Current from the Switches & Sensors menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. The numerical value shown indicates the current mug sensor value.

Mug Sensor - Current
Current Sensor Value
200

2. The Mug Sensor value can be any number between 0 and 255 and represents the current value read from the sensor. The engineer can test the mug sensor by blocking the SureVend™ sensors located in the drink dispense area. The value displayed in the status line will drop as the sensors are blocked.

**Mug Sensor - Average:** This menu gives the engineer an indication as to overall efficiency of the SureVend™ sensor.

1. Highlight Mug Sensor - Average from the Switches & Sensors menu and press the ↵ (Edit) key. The LCD will display the screen as shown. The value displayed represents the average sensor calibration value.

Mug Sensor - Average
Average Sensor Value
195

#### 4.3.5 Test Vend Without Cups

This menu allows the engineer to test vend a selection without dropping a cup.

**N.B.** Ensure that a suitable container is placed under the dispense position to receive the vend.

1. Highlight Test Vend Without Cups in the main Test menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. Make a selection using the drink selection keypad and press the START/? button. The machine will dispense the selection without dropping a cup.

Test Vend Without Cups
Insert Money
or
Make a Selection
Credit .00

2. Press the ✕ (Exit) key to return to the main test menu screen.



### 4.3.6 Test Vend

This menu allows the engineer to make a test vend in order to verify that the dispensed vend is acceptable.

1. Highlight Test Vend in the main Test menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite.
2. Make a selection using the drink selection keypad and press the START/? button. The machine will drop a cup before dispensing the selection. If the **SureVend™** system (see page 38) is turned on the sensors must be activated within 3 seconds of the cup being dispensed.
3. Press the **X** (Exit) key to return to the main test menu screen.

Test Vend	
Insert Money	
or	
Make a Selection	
Credit .00	

### 4.3.7 Grinder Test (B2C Machines)

This sub menu allows the engineer to test for correct operation of the bean grinder fitted to Espresso machines.

**N.B.** Remove CoEx® brewer from the machine and place a suitable container under the grinder outlet to catch any coffee grounds before starting the test sequence.

1. Highlight Grinder Test in the main Test menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. Press button 1 on the drink selection keypad. The grinder will run for approximately 4 seconds.
2. Press the **X** (Exit) key to return to the main test menu screen.

Grinder Test
Grinder Number
1
Press Any Number

### 4.3.8 Teapot Assembly Test (B2C Machines)

This sub menu allows the engineer to test for correct operation of the teapot unit fitted to Espresso machines.

1. Highlight Teapot Assembly Test in the main Test menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. Press the START/? button. The teapot will rotate one full revolution and the LCD will display the message **Moving**.
2. When complete the LCD reverts to the **Idle** screen. Press the **X** (Exit) key to return to the main test menu screen.

Test Teapot assembly
Idle
Press START (?) to Begin

### 4.3.9 Display

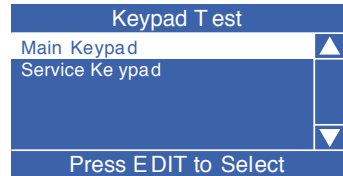
Entry into this menu allows the engineer to test the LCD display screen.

1. Highlight Display in the Test menu and press the ↵ (Edit) key. Press the START/? key repeatedly to cycle through the different test patterns. The test patterns will reveal any flaw in the display.
2. Press the ✕ (Exit) key to return to the main test menu screen.

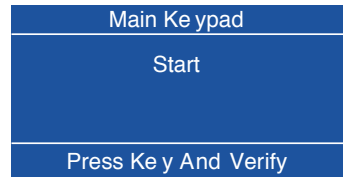
### 4.3.10 Keypad Test

This menu enables the engineer to test each key on both the drink selection keypad and internal service keypad to ensure correct operation.

1. Highlight Keypad Test in the Test menu and press the ↵ (Edit) key. The LCD will display the screen with Main Keypad highlighted as shown.



2. To test the Main Keypad, press the ↵ (Edit) key to access the test screen. Press any key on the drink selection keypad and verify that it is displayed correctly. Example; pressing the START/? key on the drink selection keypad will display the screen as shown opposite.



3. Press the ✕ (Exit) key to return to the Keypad Test menu screen. Use the ▼ (down) key to highlight Service Keypad and press the ↵ (Edit) key to access its test screen. Follow the procedure described above to test the service keypad.

**N.B.** Pressing either the ↵ (Edit) key or ✕ (Exit) key (or 1 and 2 on the service keypad) will return to the Keypad Test menu screen.

## 4.4 Price Menu

Entry into this menu allows the engineer to enter individual prices for each drink selection available, one price for all drink selections and set a discount to be applied for customers who use their own cup/mug. The menu also contains a sub menu which allows the engineer to view the highest and lowest price set in the machines memory.

**N.B.** Values entered via this menu are only applicable to machines fitted with a coin/card system.

#### 4.4.1 Individual Prices

This sub menu allows the engineer to set an individual price for each drink selection available from the machine.

1. With Individual Prices highlighted as shown opposite, press the  $\downarrow$  (Edit) key to access the menu.
2. Upon entry into this sub menu, all drink selections available from the machine are listed along with the current drink price for the highlighted selection. The example shown illustrates an Instant Coffee selection with a price set currently at 35p.
3. To change the price of the highlighted selection, press the  $\downarrow$  (Edit) key. The LCD will change and display the screen as shown. To update the price, e.g. increase to 45p, press the sequence 0-0-0-4-5 using the appropriate number keys on the drink selection keypad.
4. Press the  $\downarrow$  (Edit) key to return to the Individual Prices screen and verify that the new price displays in the status line along the bottom of the display. Use the  $\blacktriangle$  (up) or  $\blacktriangledown$  (down) keys to highlight further selections.

Price	
Individual Prices	$\blacktriangle$
Entire Machine	
Mug Discount	
View High/Low Price	$\blacktriangledown$
Press EDIT to Select	

Individual Prices	
Instant Coffee	$\blacktriangle$
Instant Decaff Coffee	
Instant Tea	
Chocolate	
Cappuccino	$\blacktriangledown$
=£ 0. 35	

Instant Coffee	
000.45	
0-9 to Edit Value Edit when Finished	

#### 4.4.2 Entire Machine

This sub menu allows the engineer to set a single price for all selections available from the machine.

1. When highlighted from within the Price menu, the LCD will display the screen, with the current value (e.g. 40p), as shown.
2. Press the  $\downarrow$  (Edit) key to access the Entire Machine sub menu. To update the value, e.g. set a price of 50p, press the sequence 0-0-0-5-0 using the appropriate number keys on the drink selection keypad. Press the  $\downarrow$  (Edit) key to return to the Price menu screen and verify that the new price displays in the status line along the bottom of the display.

Price	
Individual Prices	$\blacktriangle$
Entire Machine	
Mug Discount	
View High/Low Price	$\blacktriangledown$
=£ 0. 40	

Entire Machine	
000.50	
0-9 to Edit Value Edit when Finished	

**Tip:** If most selections are to be sold at the same price, use this menu to quickly set the entire machine to this price, then access the Individual Prices menu to adjust prices for individual selections. Entering a single price for the entire machine will over-ride any individual prices previously programmed.

#### 4.4.3 Mug Discount

This sub menu allows the engineer to program a discount value against all drink selections for customers who use their own cup/mug.

When a customer places their own cup into the dispense area and selects a drink, the SureVend™ sensors will detect the cup and disable the cup drop mechanism. The price set for Mug Discount is then subtracted from the price of the drink selected and the appropriate change/credit returned to the customer.

**N.B.** It is important to ensure that any value entered for a mug discount is supported by the coin mechanism fitted to the machine, e.g. if a mug discount is set at 2p but the lowest coin available from the coin mechanism is 5p, the machine will not return the discount to the customer.

1. Highlight the Mug Discount sub menu from within the Price menu. The LCD will display the screen, with a current value in the status line (e.g. 5p), as shown. Press the ↵ (Edit) key to access the Mug Discount sub menu.

Price	
Individual Prices	▲
Entire Machine	
Mug Discount	
View High/Low Price	▼
=£ 0. 05	

2. To enter a discount value, e.g. 6p, press the sequence 0-0-0-0-6 using the appropriate number keys on the drink selection keypad.
3. The LCD will change and display the screen as shown. Press the ↵ (Edit) key to return to the Price menu screen and verify that the new price displays in the status line along the bottom of the display.

Mug Discount	
000.06	
0-9 to Edit Value Edit when Finished	

#### 4.4.4 View High/Low Price

This sub menu allows the engineer to view the highest and lowest values in force, programmed via the Individual Prices sub menu.

**N.B.** If a single price is currently in force, this value will be displayed in both fields.

## 4.5 Product Configuration Menu

Entry into this menu allows the engineer to configure the selection timers for the drink selections, disable drink selections, turn SureVend™ On or Off, set the cup size and heater tank temperature settings and set brewer waste counter values. Additionally for B2C machines (as shown) the menu includes water compensation and a CoEx® Setup sub-menu enabling the CoEx® brewer to be setup correctly.

Product Configuration	
Configuration Version	▲
Selection Timers	
Disable Selections	
SureVend	
Cup Size Selection	▼
Genesis GAWU	
Water Compensation	
Co-Ex Set-Up	
Heater Tank Set-Up	
Brewer Waste Management	




### 4.5.1 Configuration Version

This displays the manufacturer configuration code for the machine and is for information purposes only.

### 4.5.2 Selection Timers


The machines are supplied pre-programmed with carefully tested default drink recipes. These recipes are for 7oz drinks and will be suitable for most applications. Each selection can, however, be adjusted to accommodate different ingredient types or operator/customer preference. These recipes can be quickly and easily changed from within the Selection Timers menu.

**Important!** All selection timer values are displayed in seconds except for drink selections made with fresh beans from B2C (espresso) machines, where water values are displayed in millilitres (ml) and fresh coffee values in grams (g).

1. Highlight Selection Timers then press the  (Edit) key to access the menu. The menu contains all of the drink selections available from the machine. Scroll down using the  key to highlight a selection and press the  (Edit) key to enter the sub-menu.

Selection Timers	
Instant Coffee	▲
Freshbrew Coffee	
Fresh Coffee	
Freshbrew Tea	
Chocolate	▼
Press EDIT to Select	

2. The following examples describe how to adjust **Instant Coffee**, a recipe common to all machines and the **Fresh Coffee from Beans** recipe found in the espresso machine.

3. **Instant Coffee:** With Instant Coffee highlighted in the Selection Timers menu, press the  (Edit) key to access the Instant Coffee Timers menu. This menu, shown opposite, contains the three ingredients which may be involved in an Instant Coffee selection plus a Jug Size sub menu which allows the engineer to configure the size of an Instant Coffee jug vend.

Instant Coffee	
Milk	▲
Sugar	
Instant Coffee	
Jug Size (Cups)	▼
Press EDIT to Select	

4. Scroll down and highlight Instant Coffee. Press the  $\downarrow$  (Edit) key to access the menu. The status line at the bottom of the screen shows the current value of the highlighted timer. In the example shown, the Hot Water value is configured to be on for 4 seconds.

The default Instant Coffee timers are:

Hot Water	=	4.00 s
Ingredient 1	=	1.00 s
Ingredient 2	=	1.50 s
Ingredient 3	=	0.75 s
Product Delay	=	1.00 s
Whipper Time	=	4.50 s
Whipper Delay	=	0.50 s
Post Dispense Delay	=	3.00 s

Instant Coffee	
Hot Water	▲
Ingredient - 1	
Ingredient - 2	
Ingredient - 3	
Product Delay	▼
= 4.00 s	
Whipper Time	
Whipper Delay	
Post Dispense Delay	

**N.B.** Ingredient 1, 2 and 3 shown relate to the default normal, strong and mild timings.

5. **F/B Coffee from Beans:** With F/B Coffee from beans highlighted in the Selection Timers menu, press the  $\downarrow$  (Edit) key to access the Fresh Coffee Timers menu. This menu, shown opposite, contains the three ingredients which may be required in a fresh coffee from ground beans selection.

F/B Coffee From Beans	
Milk	▲
Sugar	
F/B Coffee From Beans	
	▼
Press EDIT to Select	

6. Scroll down and highlight F/B Coffee from beans. Press the  $\downarrow$  (Edit) key to access the menu. The status line at the bottom of the screen shows the current value of the highlighted timer. In the example shown, the Hot Water value is configured to deliver 80ml of water during the vend.

The default F/B Coffee from beans timers are:

Hot Water	=	80 ml
Ingredient 1	=	6.0 g
Ingredient 2	=	7.0 g
Ingredient 3	=	5.0 g
Product Delay	=	1.00 s
Post Dispense Delay	=	0.00 s

F/B Coffee From Beans	
Hot Water	▲
Ingredient - 1	
Ingredient - 2	
Ingredient - 3	
Product Delay	▼
= 80 ml	
Post Dispense Delay	

**N.B.** Ingredient 1, 2 and 3 shown relate to the default normal, strong and mild timings.

7. To strengthen the flavour of the normal coffee/fresh coffee selection, lengthen the time of the product throw. Press the  $\blacktriangledown$  (down) key to highlight **Ingredient -1**. The status line at the bottom of the screen will display the current value.

8. **Instant Coffee:** Press the ↵ (Edit) key to access the screen as shown. Enter a value for a stronger normal selection, e.g. 0.75 s. Press the sequence 0-0-7-5 using the drink selection keypad.

Ingredi ent - 1
00.75
0-9 to Edit Value Edit w hen Finish ed

9. Press the ↵ (Edit) key to return to the Instant Coffee menu and verify that the new timing value is displayed at the bottom of the screen.

**N.B.** When in this screen with the ingredient highlighted, pressing the START/? key will run the ingredient motor for the programmed time, allowing the engineer to collect and weigh the ingredient to determine gram throw if required. This also applies to soluble ingredients in espresso machines.

10. **F/B Coffee from Beans:** Press the ↵ (Edit) key to access the screen as shown. Enter a value for a stronger normal selection, e.g. 6.5 g. Press the sequence 0-6-5 using the drink selection keypad.

Ingredi ent - 1
06.5
0-9 to Edit Value Edit w hen Finish ed

11. Press the ↵ (Edit) key to return to the Coffee Bean menu and verify that the new value is displayed at the bottom of the screen.
12. Adjust the other timers within the Instant Coffee/Fresh Coffee menu as desired. These recipes also contain menus for Milk and Sugar timers. If necessary adjust the timings for these ingredients. Once all timings have been entered and verified, vend the selection to ensure that the new recipe is satisfactory and that the cup does not under or over-fill.
13. Each drink selection available from the machine will be made up with different selection timers, for example the Cappuccino recipe will contain timers for Cappuccino Topping, Instant/Fresh Coffee and Sugar and will also contain whipper timers which control how the selection is mixed and presented in the cup.
14. **Product, Whipper and Post Dispense Delays** - these determine:

**Product Delay** - the time interval between the water valve start and the start of the product ingredient motor.

**Whipper Delay** - the time interval between the water valve start and the start of the product whipper motor.

**N.B.** The sugar whipper delay will always take precedent over the milk whipper delay. If both are selected the total whipper run time will be the sum of the sugar whipper and milk whipper run times.

**Post Dispense Delay** - when the dispense head is retracted after a vend.

### 4.5.3 Disable Selections

This sub menu allows the engineer to disable individual or all drink selections if necessary. With Disable Selections highlighted, press the ↵ (Edit) key to access the menu.

1. Upon entry into the menu the LCD will display the screen as shown. Using the ▲ (up) or ▼ (down) keys, scroll through the menu until the required drink selection is highlighted. Pressing the ↵ (Edit) key will select the drink, indicated by an X appearing in its adjacent box.

Disable Selections	
<input type="checkbox"/>	Instant Coffee
<input type="checkbox"/>	Instant Decaff Coffee
<input checked="" type="checkbox"/>	Instant Tea
<input type="checkbox"/>	Chocolate
<input type="checkbox"/>	Cappuccino
Start = Set or Clear All	

2. If necessary continue until all required drink selections have been checked. Pressing the ✕ (Exit) key will move back to the Product Configuration screen and save the new parameters to the machines memory.

**N.B.** Pressing the START/? key on the drink selection keypad will check all boxes if empty, disabling all drink selections or clear all boxes if previously checked.

3. On returning to standby mode the selection button light will be extinguished next to any drink selections that have been disabled, indicating to the customer that the drink choice is un-available.

### 4.5.4 SureVend™

This menu enables the SureVend™ cup delivery sensor to be turned on or off.

#### SureVend™ Overview:

1. SureVend™ ensures that a cup is always available in the cup station before any money is collected or product delivered. The sensing system is a beam of infra-red light across the cup station that is broken by a cup as it falls into position from the cup drop unit, or by a customer placing his own mug in the dispense area.
2. The SureVend™ software monitors the cup station sensor during the time that the cup ring is operated and for three seconds afterwards. If a cup is not detected the software will then attempt to drop a second cup and if necessary, a third time.

Vend Failed	
Press f or Change or Remove Card	
Credit 0.40	12.31

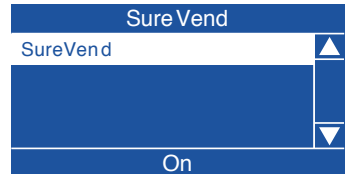
After three failed vend attempts the cup ring is placed temporarily out of service. The machine will beep once and the LCD will display the Vend Failed message (if set to Pay Vend mode).



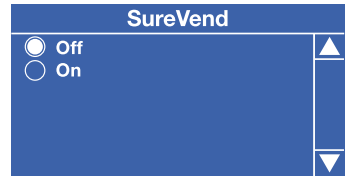
3. Customers can now get their money back by pressing the coin return button or removing their card. The LCD will change and display the message **Out of Cups Please Insert Mug**. The machine remains in service but will not vend a cup from the cup drop unit.
4. To clear the message and return to standby mode; open the door, insert the safety key and press Switch 14 on the Service keypad. Check and if necessary, clear the cup drop unit and ensure correct operation before leaving the machine.

**To configure SureVend™, proceed as follows:**

1. From the Product Configuration menu highlight SureVend™ and press the ↵ (Edit) key. By default SureVend™ is factory set to On as indicated by the status line at the bottom of the screen.



2. To disable SureVend™, press the ↵ (Edit) key to enter the SureVend™ On/Off screen. Use the ▲ (up) key to select Off (indicated by the filled radio button).



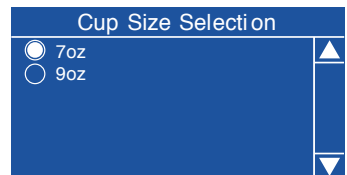
3. Press the ↵ (Edit) key to confirm the selection and return to the SureVend™ screen. Verify that the status line at the bottom of the screen displays Off when SureVend™ is highlighted.
4. Pressing the ✕ (Exit) key will move back to the Product Configuration screen and save the new parameter to the machines memory.

**4.5.5 Cup Size Selection**

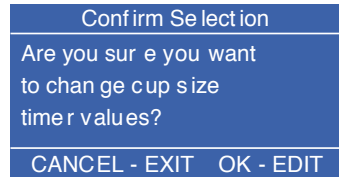
This sub menu allows the engineer to quickly and easily change the cup size dispensed by the machine, either 7oz or 9oz when required.

**Important!** Changing the cup size reloads the CMS default settings for all drinks, overwriting any amendments previously made.

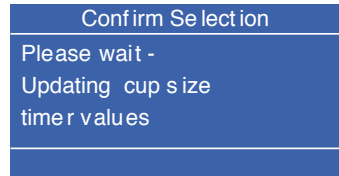
1. From the Product Configuration menu highlight Cup Size Selection. The screen will display the current cup size (eg. 9oz) as indicated by the status line at the bottom of the screen.
2. To change the cup size, press the ↵ (Edit) key to enter the Cup Size Selection screen. Use the s (up) key to select 7oz (indicated by the filled radio button).



- Press the ↵ (Edit) key. The screen will change and prompt the engineer to confirm the selection. Press the ↵ (Edit) key to continue.



- The LCD will display the screen as shown. In the background the software is updating all pre-loaded parameters relating to serving a 7oz drink.



- Once the software has completed updating the timer values the screen will change and display the message **Update Complete**. Press the X (Exit) key twice to return to the Product Configuration screen.

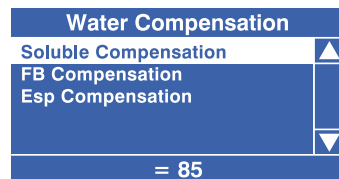
#### 4.5.6 Water Compensation (Espresso Machines)

This sub menu allows the engineer to finely “tune” the bean to cup water system to compensate for varying operating conditions - type of beans, grind particle size, water flow etc.

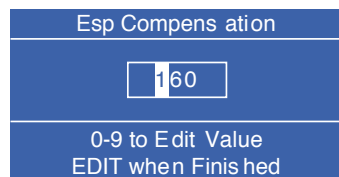
**Important!** The [Grinder Calibration](#) (see page 42) **MUST** be carried out before adjusting the Water Compensation.

Each drink type has water level compensation enabling tuning of the freshbrew and espresso drink types available from the machine. To adjust the water compensation values, proceed as follows:

- From the Product Configuration menu highlight Water Compensation and press the ↵ (Edit) key to access the menu screen as shown. Using the ▲ (up) or ▼ (down) keys, scroll through the menu until the required drink type is highlighted e.g. Esp Compensation for espresso and espresso based selections. Press the ↵ (Edit) key to access the menu.



- The LCD will display the screen as shown opposite where 160 is the default value for espresso selections, set when the machine leaves the factory. The following examples describe how to adjust this setting if required.



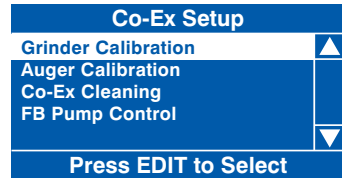
**N.B.** Before proceeding with the following tests, ensure that you have an accurate measuring cylinder to hand.

3. **Soluble Compensation:** Enter the Selection Timers menu and access the Hot Water sub menu. Check and note the water timer setting (default 160ml). Return the machine to standby mode and vend a hot water selection. Carefully measure the amount of water dispensed. If the dispensed amount is less or more than 160ml, return to the Water Compensation menu as described above and enter the Soluble Compensation sub menu - default value 115. Enter a value higher (e.g. 120) or lower (e.g. 110), return to standby, vend a second hot water selection and measure the amount of water dispensed. Continue increasing/decreasing the water compensation amount until a measured value of 160ml is dispensed.
4. **Freshbrew Compensation:** Enter the Selection Timers menu and access the Freshbrew Coffee sub menu. Check and note the water timer setting (default 80ml plus 40ml for sugar and 40ml for milk). Return the machine to standby mode and vend a black freshbrew coffee (no sugar) selection. Carefully measure the amount of water dispensed. If the dispensed amount is less or more than 160ml, return to the Water Compensation menu as described above and enter the Freshbrew Compensation sub menu - default value 115. Enter a value higher (e.g. 120) or lower (e.g. 110), return to standby, vend a second black freshbrew coffee selection and measure the amount of water dispensed. Continue increasing/decreasing the water compensation amount until a measured value of 160ml is dispensed.
5. **Espresso Compensation:** Enter the Selection Timers menu and access the Espresso sub menu. Check and note the water timer setting (default 45 ml plus 15 ml for sugar). Return the machine to standby mode and vend an espresso (no sugar) selection. Carefully measure the amount of water dispensed. If the dispensed amount is less or more than 60 ml, return to the Water Compensation menu as described above and enter the Esp Compensation sub menu - default value 160. Enter a value higher (e.g. 165) or lower (e.g. 155), return to standby, vend a second espresso selection and measure the amount of water dispensed. Continue increasing/decreasing the water compensation amount until a measured value of 60ml is dispensed.

### 4.5.7 Co-Ex Setup (B2C Machines)

This sub menu enables the engineer to setup the CoEx® brewer and initiate the brewer cleaning cycle. Options within the menu enable the calibration of the brewer and the auger to programme in a base value from which the strength of a cup of coffee can be adjusted. Brewer cleaning is very important and this menu ensures that it is cleaned at regular intervals. A cleaning cycle of between 7 and 10 days is initiated, if a clean routine is not performed within this period all B2C and freshbrew drinks can not be selected.

From the Product Configuration menu highlight Co-Ex Setup to access the menu. The screen displays the options required to correctly setup the CoEx® brewer, which is required before B2C and Freshbrew drinks can be dispensed.

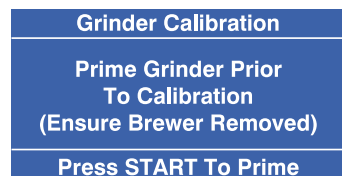
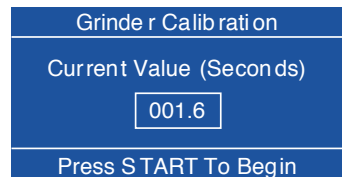


#### 1. Grinder Calibration (B2C Machines)

This sub menu allows the engineer to calibrate the grinder settings (stored in the machines memory) to the type of coffee beans dispensed and converts gram settings to run times (seconds). This procedure must always be carried out by the engineer before the B2C machine is used for the first time, when the type of beans dispensed is changed, before adjusting the water compensation or after the grinder mechanism has been removed/repaired.

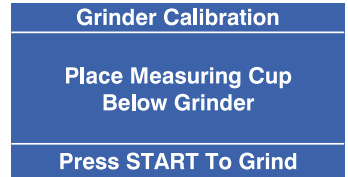
**Important!** Before commencing the following procedure, ensure that you have a set of accurate gram scales and a cup with which to catch the ground coffee. Using the 'tare' function, calibrate the empty cup with the gram scales. Ensure that the CoEx® brewer is removed from the machine, the brewer waste bucket is in position, the bean container contains beans and the container outlet slide is open. To configure the Grinder Calibration, proceed as follows:

- From the Co-Ex Setup menu highlight Grinder Calibration and press the  $\downarrow$  (Edit) key to access the menu screen as shown. This displays the current calibration setting in seconds, eg 1.6 grams of ground coffee will be dispensed per second of grinder operation.
- Press the START/? key on the drink selection keypad to begin the calibration process. The machine displays the menu screen as shown. Press the START/? key. The machine will pause for 3 seconds before priming the grinder.

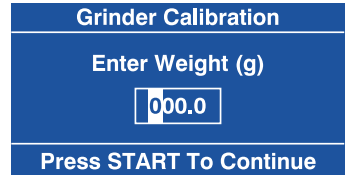


Ensure that the waste bucket is placed correctly in the machine to catch dispensed ground coffee.

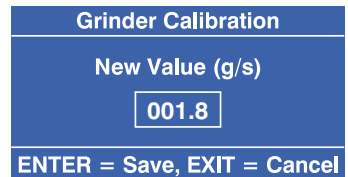
3. The LCD will now display the menu screen as shown opposite. Place the calibrated cup under the grinder outlet and press the START/? key. The grinder will run and dispense dry ground coffee into the cup.



4. The LCD will now display the menu screen as shown opposite. Weigh the cup and its contents and enter the weight into the machine. If the weight of ground coffee was 6.5 grams, enter 0-0-6-5 using the drink selection keypad. Empty the contents of the cup and press the START/? key to continue calibrating the grinder.



5. Repeat steps 3 and 4 twice more. Upon completion the LCD will change and display the new calibrated value as a value of grams per second as the example shown. Press the ↵ (Edit) key to save the new value or X (Exit) key to cancel.



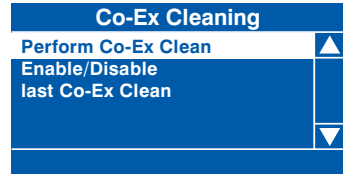
2. **Auger Calibration:** This menu enables the engineer to calibrate the auger settings (stored in the machines memory) to the type of coffee dispensed and converts gram settings to run times (seconds). This procedure must always be carried out by the engineer before the B2C machine is used for the first time, when the type of coffee dispensed is changed and before adjusting the water compensation.

**Important!** Before commencing the following procedure, ensure that you have a set of accurate gram scales and a cup with which to catch the freshbrew ingredient. Using the 'tare' function, calibrate the empty cup with the gram scales. Ensure that the CoEx® brewer is removed from the machine, the brewer waste bucket is in position, the freshbrew container contains ingredient and the container outlet slide is open. To configure the Auger Calibration proceed as follows:

1. From the Co-Ex Setup menu highlight Auger Calibration and press the ↵ (Edit) key to access the menu screen as shown. The procedure is the same as for Grinder Calibration (see page 42), follow the on screen instructions weighing the dispensed freshbrew ingredient and entering the weight.

2. On completion press the ↵ (Edit) key to save the new value or X (Exit) key to cancel and return to the Co-Ex Setup menu.
3. **Co-Ex Cleaning:** This menu enables a brewer clean to be initiated and details of the last brewer clean to be displayed.

**Perform Co-Ex Clean:** This option performs a brewer tablet clean as also performed by button 11 on the Service Keypad.



This initial clean starts the cleaning routine ten day cycle. A warning message is displayed on the drink selection keypad screen and if ignored bean to cup and freshbrew drinks cannot be selected, ten days after the last succesful clean.

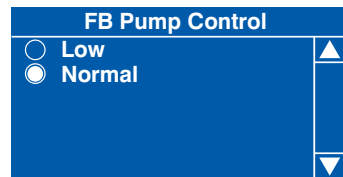
Ensure that the **Time and Date** are correctly setup (see page 49) before this is initiated as the 10 day cleaning cycle is based on this.

**Enable/Disable:** This menu by default enables the Co-Ex brewer cleaning routine.

CMS recomend that this is NOT changed to disable the brewer cleaning routine. To do so has an adverse effect on the quality of the drink and on the brewer.

**Last Co-Ex Clean:** This displays the time and date of the last successful Co-Ex clean.

4. **FB Pump Control:** This enables the Fresh/Bean coffee pump pressure to be changed, Normal is the default to produce the Fresh/bean coffee drinks.



These drinks are low pressure drinks, Espresso drinks are made under a high pressure. If a problem occurs when vending Bean or Fresh coffee drinks, were the pressure wrongly switches from low to high pressure, the low pressure can be set lower by selecting Low on this menu.

#### 4.5.8 Heater Tank Set-Up (Instant & Freshbrew Machines)

This sub menu allows the engineer to set values relating to the target temperature to which the water will be heated to and maintained at within the heater tank, and the minimum temperature at which the machine will vend a drink.

**Heater Tank Temperature-Up:** From the Product Configuration menu, highlight Heater Tank Set-Up and press the ↵ (Edit) key. The Heater Tank Temperature menu is highlighted and displays the default temperature - factory set to 90°C - in the status line at the bottom of the screen.

Heater Tank Set-Up	
Heater Tank Temperature	▲
Minimum Vend Temperature	
= 90C	

1. To set a new maximum temperature press the ↵ (Edit) key. The LCD will display the screen as shown. Enter the new temperature value, e.g. press 0-8-5 using the drink selection keypad to set a maximum temperature menu of 85°C.

Heater Tank Temperature	
090	
0-9 to Edit Value Edit when Finished	

2. Press the ↵ (Edit) key to return to the Heater Tank Set-Up menu screen and verify that the new value is displayed in the status line.

**N.B.** The available temperature values range from 75°C to 98°C.

**Minimum Vend Temperature:** The machine will suspend vending if the water in the heater tank falls below a certain value. This value is factory set to 75°C as displayed in the status line at the bottom of the screen when Minimum Vend Temperature is highlighted.

Heater Tank Set-Up	
Heater Tank Temperature	▲
Minimum Vend Temperature	
= 75C	

1. To set a new Minimum Vend Temperature press the ↵ (Edit) key. The LCD will display the screen as shown. Enter the new temperature value, e.g. press 0-7-8 using the drink selection keypad to set a minimum vend temperature of 78°C.

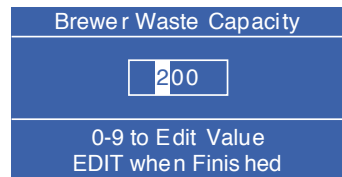
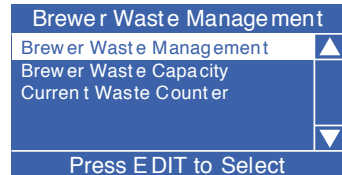
Minimum Vend Temperature	
078	
0-9 to Edit Value Edit when Finished	

2. Press the ↵ (Edit) key to return to the Heater Tank Set-Up menu screen and verify that the new value for the minimum vend temperature is displayed in the status line.

### 4.5.9 Brewer Waste Management

This sub menu allows the engineer to set a value for the maximum amount of brewer waste that can be ejected from the brewer (CoEx® and freshbrew) into the waste container. This value is used to determine the number of vends that can be completed before freshbrew/espresso drinks become disabled and the waste container needs to be removed from the machine and emptied. The menu also allows the engineer to turn waste management on or off and view the number of freshbrew/espresso drinks vended since the waste container was last emptied and the waste counter reset.

1. From the Product Configuration menu highlight Brewer Waste Management and press the  $\downarrow$  (Edit) key to access the menu screen as shown. To set a a maximum waste counter value press the  $\downarrow$  (down) key and highlight Brewer Waste Capacity.
2. With Brewer Waste Capacity highlighted, press the  $\downarrow$  (Edit) key to access the sub-menu screen. To change the value enter a new number using the drink selection keypad. Press the  $\downarrow$  (Edit) key to store the new value.

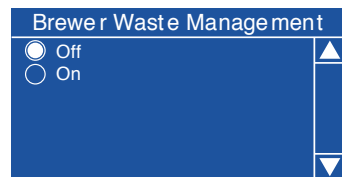


**N.B.** The program is set to allow a maximum value of 200 to be entered as shown.

3. From the Brewer Waste Management menu press the  $\downarrow$  (down) key and highlight Current Waste Counter. The number displayed shows the number of freshbrew/espresso vends that have been dispensed since the waste counter was last reset.

**Important!** Once the brewer waste container has been emptied, cleaned and re-fitted to the machine, the waste counter must be reset by pressing button 12 on the service keypad mounted inside the door. The machine will bleep twice to confirm that the counter has been reset.

4. To turn waste management Off, highlight Brewer Waste Management from the Brewer Waste Management screen. Press the  $\downarrow$  (Edit) key to display the screen as shown. Press the  $\uparrow$  (up) key to select Off (indicated by the filled radio button).



**N.B.** If the brewer waste management is turned off the waste counter becomes disabled.



## 4.6 Free Vend Menu

This menu allows the engineer to turn free vend on or off when the machine is fitted with a coin/card mechanism.

1. From the Main Menu screen use the ▼ (down) key to scroll through the menu until Free Vend is highlighted. By default, Free Vend is set to Off as indicated by the status line at the bottom of the screen.
2. To set Free Vend to On, press the ↵ (Edit) key to access the screen as shown. Press the ▼ (down) key to select On (indicated by the filled radio button). Press the ↵ (Edit) key to confirm the selection and return to the Main Menu screen.
3. Verify that the status line at the bottom of the Main Menu screen displays On when Free Vend is highlighted.



**N.B.** When the machine is set to Free Vend, the standby screen will display the message No Money Required. If set to Free Vend it is also necessary to turn off any **Monetary** devices (see page 50).

## 4.7 Coins In/Out

**N.B.** Coins In/Out will only be displayed on machines fitted with an MDB coin mech.

The Coins In/Out menu emulates the coin mechanism from the front end screen and allows the engineer to view information relating to the coin mechanism and eject coins from the machine without opening the door.

1. From the Main Menu screen use the ▼ (down) key to scroll through the menu until Coins In/Out is highlighted. Press the ↵ (Edit) key to access the menu screen which will look similar to the example shown.

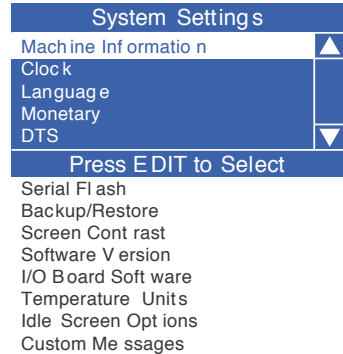
Coins In/Out			
Press	Coin	Count	Value
1	0.05	34	1.70
2	0.10	18	1.80
3	0.20	9	1.80
4	0.50	8	4.00

2. From this screen the engineer can view the coin sets in the coin mechanism, the number of coins in each coin stack and the total value of the coins. To eject coins from the mechanism the engineer simply presses the relevant button on the keypad eg pressing button 4 will eject a 50p coin. The count will reduce to 7 and the value to 3.50.

## 4.8 System Settings Menu

This menu allows the engineer to input text information relevant to the machine and its location, set the current time and date, change the language displayed, configure the monetary system, set and view DTS information, backup and restore machine software, view the machine and I/O board software versions installed in the machine, set temperature and idle screen display options and input custom messages.

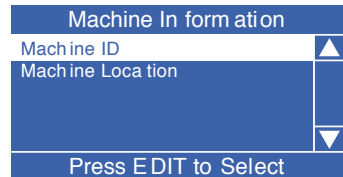
**N.B. Serial Flash** sub menu is only visible when a **Serial Flash** card (see page 58) is inserted into plug J9A on the control board.



### 4.8.1 Machine Information

This sub-menu allows the engineer to create a unique identification for the machine and enter its location. A combination of text and numerical data can be entered and stored via the machines keypad.

1. From the Systems Settings menu highlight Machine Information and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. To update/create a Machine ID press the ↵ (Edit) key.



2. Enter a machine ID using the 0-9 drink selection keys. Press the relevant key until the required letter/number is highlighted. To correct an input error press the 0 key once. To add a space between characters, press the 0 key twice.

The keys are configured as follows:

- 1 = , . ? ' ; : " 1
- 2 = a b c 2
- 3 = d e f 3
- 4 = g h i 4
- 5 = j k l 5
- 6 = m n o 6
- 7 = p q r s 7
- 8 = t u v 8
- 9 = w x y z 9
- 0 = - \ \$ @ % # & 0

**N.B.** To change from lower to upper case, press the START/? key.

- When complete, press the **X** (Exit) key to return to the Machine Information menu screen. Press the **▼** (down) then **↵** (Edit) keys to highlight then enter the Machine Location screen. Enter a unique machine location using the 0-9 drink selection keys as described above. When complete press the **X** (Exit) key.

#### 4.8.2 Clock

The machine displays the current time in either 12 or 24 hour format.

Upon entry to the System Settings menu, the Clock sub menu is highlighted. Press the **↵** (Edit) key to access the Clock sub menu screen. This menu allows the engineer to set the date, time and daylight saving via 3 separate sub menus.

**N.B.** The current date, time and daylight saving (when highlighted) held in the machines memory are displayed in the status line at the bottom of the screen.

- Date:** Press the **↵** (Edit) key to enter the Date menu. The date is displayed in day, month, year format. To set the date, e.g. 27th February 2007, press the sequence 2-7-0-2-0-7 using the appropriate number keys on the drink selection keypad.

Date
dd - mm - yy
00 - 00 - 00
Press 0-9 to Edit Value

**N.B.** The text '**Press 0-9 to Edit Value**' displayed in the status line at the bottom of the screen will alternate with the text '**Press Start To Change Mode**'. Pressing the START/? key on the drink selection keypad allows the date to be displayed in month, day, year format.

Pressing the **↵** (Edit) key will move back to the Clock menu screen and save the date to the machines memory. Confirm that the status line at the bottom of the screen displays the correct date when Date is highlighted.

- Time:** From the Clock menu screen press the **▼** (down) key to highlight the Time menu followed by the **↵** (Edit) key. The LCD will display the screen as shown opposite.

Time
hh / mm / mode: 12 / 24
00 : 00 AM
Press 0-9 to Edit Value

By default the time is displayed in 12 hour format. To enter a time of 10:30 PM press the sequence 1-0-3-0 on the drink selection keypad.

Time
hh / mm / mode: 12 / 24
10 : 30 PM
Press Ar rows To Select

As the engineer presses the final zero, the AM value will appear within a dotted box and the text at the bottom of the LCD will now read '**Press Arrows To Select**'. Press the **▲** (up) or **▼** (down) key until PM appears in the box.

Pressing the ↵ (Edit) key will move back to the Clock menu screen and save the new time to the machines memory. Confirm that the status line at the bottom of the screen displays the correct time when Time is highlighted.

**N.B.** When set to 12 hour format, the program will only allow the engineer to set the numbers 0 or 1 in the first field. Once the number 24 has been entered via the ▲ (up) or ▼ (down) keys to indicate 24 hour format, the engineer can reset the first two values to reflect 10:30 PM in 24 hour format e.g. 22:30.

3. **Daylight Saving:** From the Clock menu screen press the ▼ (down) key to highlight the Daylight Saving menu followed by the ↵ (Edit) key. The LCD will display the screen as shown opposite.

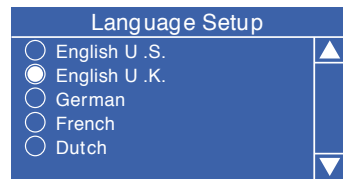


By default daylight savings time is set to Off. To choose one of the available options, press the ▲ (up) or ▼ (down) key until selected (indicated by the filled radio button) followed by the ↵ (Edit) key. Ensure that the required setting is displayed in the status line at the bottom of the screen. Press the ✕ (Exit) key to return to the main menu.

### 4.8.3 Language Setup

From this menu the engineer can specify the language that the machine will use to display messages, programming information etc. The default language for the machine is set to English U.K. To change the language setting:

1. From the System Settings menu, use the ▼ (down) key to highlight the Language Setup menu and press the ↵ (Edit) key. The LCD will display the screen as shown opposite. Using the ▲ (up) or ▼ (down) keys, select the desired language option (indicated by the filled radio button).



2. Press the ↵ (Edit) key to save the language option and return to the System Settings menu. Verify that the chosen language is displayed in the status line at the bottom of the display when Language Setup is highlighted.

### 4.8.4 Monetary

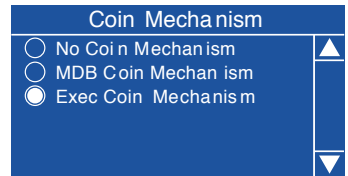
From this menu the engineer can select the type of coin/card mechanism or note reader fitted to the machine, select the coin set and configure values for low change, multiple vends, credit for failed vends etc.

The Monetary menu can display up to 11 sub menus, depending on machine configuration, as listed below:

- Coin Mechanism
- Bill Validator
- Card Reader
- Bill Stack Option
- Multiple Vend Mode (Only if MDB mech. selected)
- Change Without Purchase (Only if MDB mech. selected)
- Low Change Message (Only if MDB mech. selected)
- Accept On Low Change (Only if MDB mech. selected)
- Credit for Failed Vend (Only if MDB mech. selected)
- Card Re-Value (Only if MDB card reader / key system is selected)
- Display Coin Set

### Select The Coin Mechanism:

1. From the Monetary menu highlight Coin Mechanism and press the ↵ (Edit) key. The Coin Mechanism screen allows the engineer to select one of the options shown. Using the ▲ (up) or ▼ (down) keys, select the desired coin mechanism option (indicated by the filled radio button).



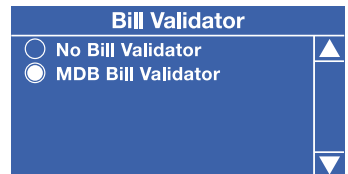
2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen coin mechanism option is displayed in the status line at the bottom of the display.

**N.B.** An Executive Card/Key system (if fitted) is enabled when Exec Coin Mechanism is selected.

### Select The Bill Validator: (USA Machines only)

**N.B.** A Bill Validator unit can only be mounted in a base cabinet supplied with the Genesis machine.

1. From the Monetary menu press the ▼ (down) key to highlight Bill Validator and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired bill validator option (indicated by the filled radio button).

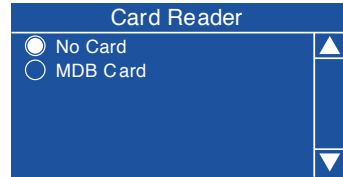


2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen Bill Validator option is displayed in the status line at the bottom of the display.

## Select The Card/Key Reader (MDB Systems Only):

**N.B.** An Executive protocol card/key system emulates an Executive coin mechanism and is selected via the [Coin Mechanism](#) menu (see page 51).

1. From the Monetary menu press the ▼ (down) key to scroll down and highlight Card Reader and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired card reader option (indicated by the filled radio button).



2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen option is displayed in the status line at the bottom of the display.

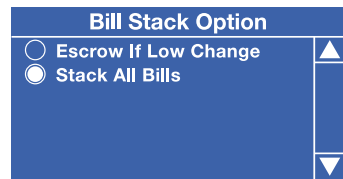
## Configure Bill Stack Option:

**N.B.** It is unlikely that Bill Stack Option will be required for Genesis machines. The following description is for information only.

The Bill Stack Option specifies how the machine accepts notes and returns change. The engineer can set one of two options:

- (i) **Escrow If Low Change:** Change will be returned to the customer when the coin return is pressed even if no purchase has been made.
- (ii) **Stack All Bills:** With this option selected, any notes tendered will be stacked and the customer will have to make a purchase in order to receive change.

1. From the Monetary menu press the ▼ (down) key to highlight Bill Stack Option and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired bill stack option (indicated by the filled radio button).



2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen bill stack option is displayed in the status line at the bottom of the display.

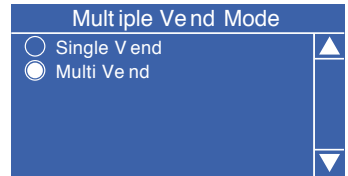
## Configure Multiple Vend Mode:

**N.B.** This option is only applicable when an MDB coin mechanism is fitted and configured from within the Coin Mechanism menu.

The Multiple Vend Mode option specifies how the machine will dispense change to the customer once a purchase is made. The engineer can set one of two options:

- (i) **Single Vend:** Change will be returned to the customer automatically as soon as a valid selection is made.
- (ii) **Multi Vend:** With this option selected the customer can make multiple vends as long as there is sufficient credit entered. In order to get change, the customer must press the coin return.

1. From the Monetary menu press the ▼ (down) key to highlight Multiple Vend Mode and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired multiple vend option (indicated by the filled radio button).



2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen option is displayed in the status line at the bottom of the display.

## Configure Change Without Purchase Value:

**N.B.** This option is only applicable when an MDB coin mechanism is fitted and configured from within the Coin Mechanism menu.

The Change Without Purchase value specifies how and when the machine returns change to a customer. If the customer deposits credit into the machine which is less than or equal to the value set in the Change Without Purchase menu, change will be returned without a purchase. However, if the credit is larger, the customer must make a purchase before change will be given.

### Examples:

**Value set to 01.00:** Non-escrowed coins less than or equal to £1.00 will be changed without purchase. All escrowed coins are returned.

**Value set to 00.00:** Forced Vend. This value forces the customer to make a selection. No change will be returned without a purchase.

**N.B.** Each coin denomination for which the coin mechanism has a tube is called an **Escrowed** coin because it can be returned.

To configure this value:

1. From the Monetary menu press the ▼ (down) key to highlight Change Without Purchase and press the ↵ (Edit) key. Enter the required value, e.g. press 0-1-0-0 using the drink selection keypad to set a change without purchase value of £1.00. To specify Force Vend, set a value of 00.00.

Change Without Purchase
01.00
0.00 = Forced Vend

2. Press the ↵ (Edit) key to save the new value and return to the Monetary menu. Verify that the entered value is displayed in the status line at the bottom of the display when Change Without Purchase is highlighted.

### Configure Low Change Message Value:

**N.B.** This option is only applicable when an MDB coin mechanism is fitted and configured from within the Coin Mechanism menu.

When the total value of the coins in the coin mechanism falls below the value set in the Low Change Message menu, the standby message displayed on the LCD will read 'Use Exact Change'.

To configure this value:

1. From the Monetary menu press the ▼ (down) key and highlight Low Change Message and press the ↵ (Edit) key. Enter the required value, e.g. press 0-1-0-0 using the drink selection keypad to set a low change message value of £1.00.

Low Change Message
01.00
0-9 to Edit Value EDIT when Finished

2. Press the ↵ (Edit) key to save the new value and return to the Monetary menu. Verify that the entered value is displayed in the status line at the bottom of the display when Low Change Message is highlighted.

**N.B.** The machine will still accept money with this value set, but may short change the customer if there is insufficient coinage in the coin mechanism. Set the Low Change Message and the Accept on Low Change values (see below) to the same figure to eliminate any chance that the customer will be short changed.

### Configure the Accept on Low Change Value:

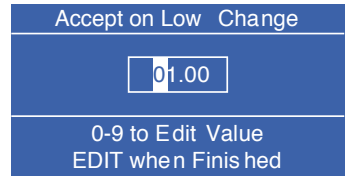
**N.B.** This option is only applicable when an MDB coin mechanism is fitted and configured from within the Coin Mechanism menu.



When the total value of the coins in the coin mechanism falls below the value set in the Accept on Low Change menu, the machine will stop accepting coins and notes for which it cannot return change. For example, if the engineer sets a value of £1.00, the machine will not accept £1 coins if there is less than £1 value of coins in the coin mechanism.

To configure this value:

1. From the Monetary menu press the ▼ (down) key to scroll down and highlight Accept on Low Change and press the ↵ (Edit) key. Enter the required value, e.g. press 0-1-0-0 using the drink selection keypad to set a value of £1.00.
2. Press the ↵ (Edit) key to save the new value and return to the Monetary menu. Verify that the entered value is displayed in the status line at the bottom of the display when Accept on Low Change is highlighted.

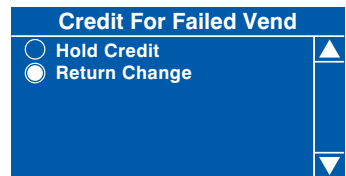


### Configure Credit For Failed Vend Option:

**N.B.** This menu is only available when an MDB coin mechanism is fitted and configured from within the Coin Mechanism menu.

This option specifies how the machine will react when a vend fails. The engineer can set one of two options:

- (i) **Hold Credit:** With this option selected the customers credit is retained, allowing them to either make an alternative selection or press the coin return.
  - (ii) **Return Change:** With this option selected the customers change is immediately returned after a failed vend.
1. From the Monetary menu press the ▼ (down) key and highlight Credit For Failed Vend and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired option (indicated by the filled radio button).
  2. Press the ↵ (Edit) key to save the selection and return to the Monetary menu. Verify that the chosen option is displayed in the status line at the bottom of the display when Credit For Failed Vend is highlighted.



### Configure Card Revalue:

Not applicable for Genesis machines.

## Configure Display Coin Set:

The Display Coin Set menu enables the engineer to configure the coin set to suit the coin/card mechanism or bill validator fitted to the machine. This ensures that the message displayed in standby mode, correctly indicates to the customer which coins (or card/key) may be entered.

The available coin sets are:

- |              |              |             |              |
|--------------|--------------|-------------|--------------|
| 1. 1p to 20p | 2. 1p to 50p | 3. 1p to £1 | 4. 5p to 50p |
| 5. 5p to £1  | 6. 5p to £2  | 7. 5c to 1€ | 8. 5c to 2€  |
| 9. 50c to 1€ | 10. Card     | 11. Key     | 12. Money    |

To configure the coin set:

- From the Monetary menu press the ▼ (down) key to highlight Coin Set and press the ↵ (Edit) key. Using the ▲ (up) or ▼ (down) keys, select the desired coin set, card or key (indicated by filled radio button).



- Press the ↵ (Edit) key to save the new coin set and return to the Monetary menu. Verify that the chosen set is displayed in the status line at the bottom of the display when Coin Set is highlighted.

## DTS

Entry into this menu allows the engineer to configure the machine in order to send audit data relating to sales and events stored in the machines memory to a data carrier or other device.

## Data Transfer Standard (EVA-DTS) - Overview

The standard makes it possible to transfer information from vending machines/payment systems to PC-based accounting/management systems and/or the opposite way. It is important that all suppliers of vending machines and payment systems agree to a common standard for the Electronic Data Transfer, because only this way the engineer can be sure that all his equipment can be read out and programmed by means of the same handheld terminal.

**DTS Standby Mode:** Scroll down and highlight DTS from the System Settings menu. Press the  $\downarrow$  (Edit) key to access the menu. The LCD will display the screen as shown. The first sub-menu DTS Standby Mode is highlighted with its current state (DDCMP) shown in the bottom line.

DTS	
DTS Standby Mode	▲
DTS Audit List	
CA304 Data Type	
Data Reset Mode	
Event Reset Mode	▼
DDCMP	
Printer Ba ud Rate	

The machine is factory set to enable data transfer via the optical DDCMP link. To change this to the DEX setting, press the  $\downarrow$  (Edit) key to access the menu and the  $\blacktriangle$  (up) key to select DEX (indicated by the filled radio button. Press the  $\downarrow$  (Edit) key to save the selection.

**N.B.** Even if the default is set to DDCMP, once the controller detects a DEX activity, it will automatically switch to the other mode. However, setting the default to the correct protocol will speed up response time.

The engineer can now download data from the machine by plugging a DEX enabled device into the DEX port (J36) on the I/O board, located on the rear of the door.

**DTS Audit List:** From this sub-menu the engineer can select which data is transferred from the machine to a DEX/DDCMP data carrier. Scroll down and highlight DTS Audit Data. Press the  $\downarrow$  (Edit) key to access the menu. The LCD will display the screen as shown.

DTS Audit List	
<input checked="" type="checkbox"/> ID 1	▲
<input checked="" type="checkbox"/> ID 2	
<input checked="" type="checkbox"/> ID 3	
<input checked="" type="checkbox"/> ID 4	
<input checked="" type="checkbox"/> ID 5	▼
Start (?)=Set or Clear All	

All data and events fields within a vending machine are assigned a unique code determined by the Standard. From this sub-menu the engineer can choose to allow all fields to be available for download by pressing the START/? key or scrolling through the list and adding an X to the required fields.

**CA304 Data Type:** This sub-menu determines whether the the data will be displayed as currency or numerical, for example, assuming that the value of pound coins in the machine is £3.00, when set to currency CA304 will read 300 in the DEX/DDCMP report. When set to numeric it will read 3.

**Data Reset Mode:** This field can be set to either AUTO or SAVE from within the sub-menu. When set to AUTO, all resettable data will be reset after a successful read.

**Event Reset Mode:** This field can be set to either AUTO or SAVE from within the sub-menu. When set to AUTO, all event data will be reset after a successful read.

**Printer Baud Rate:** This allows the engineer to set the correct baud rate for a serial printer if one is to be used. It is important for this to be set correctly to ensure successful data transfer.

### Serial Flash

This menu only becomes available when a serial flash card (Data Key CMS part no. EL11301000) is inserted into plug J9A on the control board. It allows the engineer to upgrade the machine software or backup data. The following operations are supported:

- View data information
- Delete data
- Load data into the machine
- Save data from the machine

The View, Delete and Load options will only become available when data is held on the data key. Also, when backup data is added, a description can be entered to aid retrieval. The following types of data are supported:

- **Firmware** - The operating system and default factory machine set-up data
- **Default Data** - The default factory machine set-up data - eg canister and button layout, default run times etc.
- **Configuration Data** - Any machine set-up data that can be changed by the user
- **Configuration and Sales Data** - All sales data plus the set-up data that can be changed by the operator
- **Language Data** - Not currently used

The data key can hold the following amounts of data - 1 copy of the firmware, **OR** 4 copies of default data, and 16 copies of Config data, and 16 copies of config and sales data. The following example describes how the engineer can download Config. Data to the data key.

**Important!** Before inserting the data key, ensure machine is disconnected from the power supply.

1. Open the door of the machine. Release the catch and open the monetary door. Remove the control board cover and insert the data key into connector J9A. Close the door and restore power to the machine.

2. Enter the engineers program as previously described. Access the Systems Settings menu and using the ▼ (down) key highlight Serial Flash. Press the ↵ (Edit) key to enter the sub program. If an empty card is being used the LCD will display the screen as shown.

Serial Flash	
Firmware	0
Default Data	0
Configuration Data	0
Configuration and Sales Data	0
Language Data	0

3. Using the ▼ (down) key highlight Configuration Data then press the ↵ (Edit) key to enter the sub program. As the card is empty of data the LCD will display the screen as shown.

Configuration Data	
Save Data	▲
	▼
Press E D I T to Select	

**N.B.** When a key with data loaded is used the menu will also include Image Info, Load Data and Delete Data along with the Save Data menu.

4. To save data to the key press the ↵ (Edit) key. The Save Data screen will be displayed with 16 empty data fields available. Press the ↵ (Edit) key once more to enter the menu screen as shown. From this menu the engineer can either enter the Edit Data Screen and enter a description before saving the data (see page 47 for details) or scroll down and simply save the data.

Save Data	
Edit Data	▲
Save Data	
	▼
Press E D I T to Select	

5. Press the ↵ (Edit) key to save the data to the key. The LCD will display the screen as shown before exiting to standby mode. Disconnect the machine from the power supply and open the door. Unplug the data key and replace the control board cover. Close the monetary door and the door of the machine before restoring power to the machine.

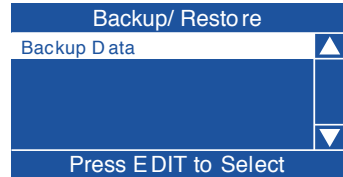
Save Data	
Are you sur e you want to save t his dat a to the disk?	
CANCEL - EXIT	OK - EDIT

## Backup/Restore

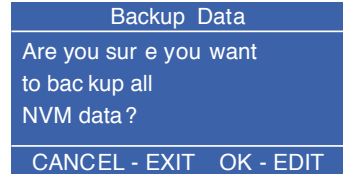
This menu allows the engineer to manually backup information stored in the machines memory to the controller board.

**N.B.** It is also possible for the engineer to programme Backup as a timed event, thus ensuring even greater security for the information stored in memory. This ensures that the machine can easily be restored to its last operational state should the information be lost through corruption or power failure. See [Backup Events](#) (see page 68) for full details.

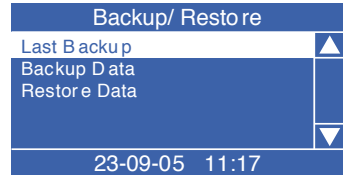
1. Scroll down and highlight Backup/Restore from the System Settings menu. Press the  $\downarrow$  (Edit) key to access the menu. If this is the first time that a backup has been selected the LCD will display the screen as shown.



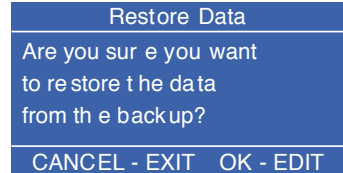
2. Press the  $\downarrow$  (Edit) key to access the menu. The LCD will display the screen as shown. To backup the memory press the  $\downarrow$  (Edit) key. After a few seconds the machine will beep once and the **Initialising** screen will be displayed before the machine returns to standby mode, ready to vend.



3. When accessing the Backup/Restore sub-menu after backups of the memory have been made, the information changes and the engineer is presented with the screen as shown. The first sub-menu, Last Backup is highlighted with the date and time this occurred displayed at the bottom of the screen.



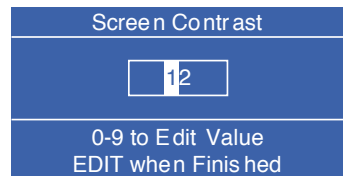
4. To restore the machines memory to the last available backup, scroll down using the  $\downarrow$  (down) key, highlight Restore Data and press the  $\downarrow$  (Edit) key to access the menu. The LCD will display the screen as shown. Press the  $\downarrow$  (Edit) key to restore the backed up data. After a few seconds the machine will beep once and the Initialising screen will be displayed before the machine returns to standby mode, ready to vend.



## Screen Contrast

Crane machines are factory set with a default screen contrast setting of 12 which should be suitable for most installations. For installations with special considerations, e.g. very low or high ambient light levels, the engineer can adjust the screen contrast via this menu to improve screen legibility.

1. From the System Settings menu, scroll down using the  $\downarrow$  (down) key to highlight the Screen Contrast menu and press the  $\downarrow$  (Edit) key. The LCD will display the screen as shown opposite. Enter a new value between 05 - 20 using the drink selection keypad.



2. Press the ↵ (Edit) key to save the new value and return to the System Settings menu. Verify that the number is displayed in the status line at the bottom of the display when Screen Contrast is highlighted.

### Software Version

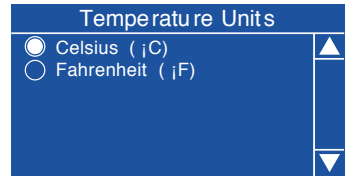
The Software version menu displays the version number of the software installed and is for information only. The menu also displays the current time and date.

### I/O Board Software

This menu displays the version number of the I/O board software installed and is for information only.

### Temperature Units

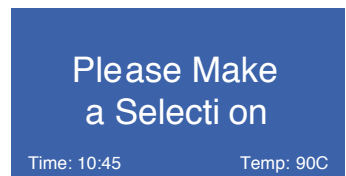
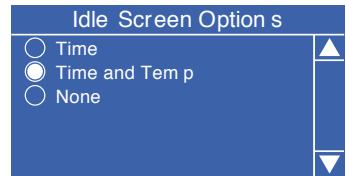
This menu allows the engineer to change the way that the temperature is displayed, either °C or °F, on the LCD when the machine is in standby mode. Use the ▲ (up) or ▼ (down) keys to set the required option followed by the ↵ (Edit) key to store/save it (indicated by the filled radio button).



### Idle Screen Options

This menu allows the engineer to configure the LCD so that it displays either the time or the time and water temperature with the standby message when idle. To configure the idle screen options, proceed as follows:

1. From the System Settings menu press the ▼ (down) key to highlight Idle Screen Options and press the ↵ (Edit) key to access the menu.
2. Press the ▼ (down) key to highlight the required option, eg Time and Temp (indicated by the filled radio button). The LCD will display the screen as shown opposite. Press the ↵ (Edit) key to return to the System Settings screen. With Idle Screen Options highlighted, verify that the status line confirms the option is set to Time and Temp.
3. Press the X (Exit) key until the machine exits the engineers program into standby mode. The LCD will display the standby message with the time and date as shown.

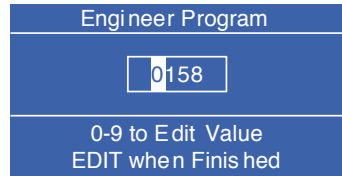
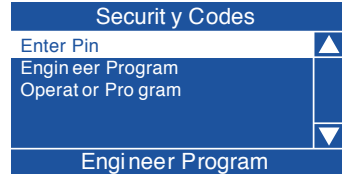


## 4.9 Security Codes Menu

This menu allows the engineer to change both the operator and engineer program entry codes for the machine. These factory default codes are 1-1-1-1 (engineers) and 2-2-2-2 (operators). If either code is changed ensure that the new code is recorded and kept in a secure place.

To change either engineer or operator program entry codes, proceed as follows:

1. From the Main Menu screen press the ▼ (down) key until Security Codes is highlighted then press the ↵ (Edit) key to access the menu screen. The LCD will display the screen as shown.
2. To change the engineer entry code, press the ▼ (down) key to highlight Engineer Program then press the ↵ (Edit) key. The LCD will display the Edit Pin screen as shown. Enter a new pin number using the drink selection keypad and press the ↵ (Edit) key.



**N.B.** This security number is not displayed. Be sure to record the new pin code and keep it in a safe place.

3. Highlight Operators Program and follow the above procedure to change the operator code. Ensure that all operators who use the machine are given the new code.

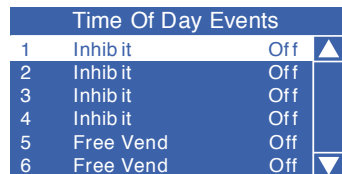
## 4.10 Timed Events Menu

### 4.10.1 Time of Day Events

From this menu the engineer can set up inhibited vend periods, free vend periods and discounted vend periods.

The following example describes how the engineer can program the machine to free vend specific drink selections between 10.30 am and 2:30 pm on week days.

1. From the Main Menu press the ▼ (down) key until Timed Events is highlighted then press the ↵ (Edit) key twice to access the Time of Day menu screen. The LCD will display the screen as shown.



**N.B.** Although event 1 is shown as Inhibit, it is possible for the engineer to set event 1 as the first Free Vend or Discounted Vend period.



2. Press the  $\downarrow$  (Edit) key to access the menu. The LCD will display the screen as shown. By default the current State is set to Off as indicated by the status line at the bottom of the screen.

1	
State	▲
Event Type	
Start Time	
Stop Time	
Days Of Week	▼
Off	

3. Press the  $\downarrow$  (Edit) key to access the State sub menu. Using the  $\downarrow$  (down) key, set the state to On (indicated by the filled radio button). Press the  $\downarrow$  (Edit) key to return to the Event 1 screen. Verify that the status line confirms the State is set to On.

State	
<input type="radio"/> Off	▲
<input checked="" type="radio"/> On	
	▼

4. Press the  $\downarrow$  (down) key to highlight Event Type and press the  $\downarrow$  (Edit) key to access the menu. Using the  $\downarrow$  (down) key, set the Event Type to Free Vend (indicated by the filled radio button). Press the  $\downarrow$  (Edit) key to return to the Event 1 screen. Verify that the status line confirms the Event Type is set to Free Vend.

Event Type	
<input type="radio"/> Inhibit	▲
<input checked="" type="radio"/> Free Vend	
<input type="radio"/> Disco unt	▼

5. Press the  $\downarrow$  (down) key to highlight Start Time and press the  $\downarrow$  (Edit) key. From this menu the engineer sets the time at which the free vend period will start. Press the sequence 1-0-3-0, using the drink selection keypad, to set the time. If necessary use the  $\uparrow$  (up) or  $\downarrow$  (down) key until AM appears in the dotted box.

Start Time	
hh / mm / mode: 12 / 24	
10	: 30 AM
Press Ar rows To Select	

6. Press the  $\downarrow$  (Edit) key to return to the Event 1 screen. Verify that the correct start time is displayed in the status line at the bottom of the screen.

7. Press the  $\downarrow$  (down) key to highlight Stop Time and press the  $\downarrow$  (Edit) key. From this menu the engineer sets the time at which the free vend period will end. Press the sequence 0-2-3-0, using the drink selection keypad, to set the time. If necessary use the  $\uparrow$  (up) or  $\downarrow$  (down) key until PM appears in the dotted box.

Stop Time	
hh / mm / mode: 12 / 24	
02	: 30 PM
Press Ar rows To Select	

8. Press the  $\downarrow$  (Edit) key to return to the Event 1 screen. Verify that the correct stop time is displayed in the status line at the bottom of the screen.

9. Press the ▼ (down) key to highlight Days Of Week and press the ↵ (Edit) key. The engineer can now set the days on which the free vend period will take place. Upon entry to the sub menu, the first day, Monday will be highlighted with an empty box. Pressing the ↵ (Edit) key will select the day, indicated by an X appearing in its adjacent box.

Days of Week	
<input checked="" type="checkbox"/>	Tuesday
<input checked="" type="checkbox"/>	Wednes day
<input checked="" type="checkbox"/>	Thursday
<input checked="" type="checkbox"/>	Friday
<input type="checkbox"/>	Saturday
Start = Set or Clear All	

Using the ▼ (down) key and the ↵ (Edit) key, highlight and select additional days of the week that the free vend period will take place. When complete press the X (Exit) key to return to the Event 1 screen.

10. Press the ▼ (down) key to highlight Selections and press the ↵ (Edit) key. The engineer can now set the drink selections that will be available during the free vend period. Upon entry to the sub menu, the Freshbrew Coffee selection will be highlighted with an empty box. Pressing the ↵ (Edit) key will select the day, indicated by an X appearing in its adjacent box.


Selecti ons	
<input checked="" type="checkbox"/>	Instant Coffee
<input checked="" type="checkbox"/>	Instant Decaff Coffe e
<input checked="" type="checkbox"/>	Instant Tea
<input type="checkbox"/>	Choc olate
<input type="checkbox"/>	Cappuc cino
Start = Set or Clear All	

Using the ▼ (down) key and the ↵ (Edit) key, highlight and select additional drink selections that will be available during the free vend period.

**Tip - Items 9 & 10:** To set the required days/selections quickly, press the START/? key to check all boxes, then using the ▼ (down) key, scroll and highlight the days/selections not required and press the ↵ (Edit) key to remove the X from the corresponding box.

11. Press the X (Exit) key three times to return to the Timed Events Menu. Using the previous sequence the engineer can quickly and easily set up additional free vend periods and inhibit vend and/or discount vend periods if required.
12. When setting up a discount price period it is necessary for the engineer to enter a value for the discount. Follow the procedure as described previously to enter a discount vend period and set the state, start time, stop time and days of the week that the event will occur.
13. The engineer can now enter a Discount menu in order to enter a discount value as a percentage (%). The LCD will display a screen similar to the one shown opposite. With Discount highlighted, press the ↵ (Edit) key to access the Discount screen.

11	
Event Type	
Start Time	
Stop Time	
Days Of Week	
Disco unt	
0%	

14. To enter the discount value, e.g. 50%, press the sequence 5-0 using the appropriate number keys on the drink selection keypad. Press the  (Edit) key to return to the 11 (Discount) screen and verify that the status line displays the discount percentage value entered.





Disco unt
<div>50</div>
0-9 to Edit Value Edit when Finish ed






**N.B.** When machine is fitted with a coin mechanism, please ensure that discount value entered can be supported by the coin tubes.

15. Press the **X** (Exit) key three times to return to the Main Menu screen.





#### 4.10.2 Sanitation Events Menu

This sub menu allows the engineer to select periods when the machine will automatically flush through the water system via the 6 timed and 6 post vend flush periods available. The default setting for all flush periods is Off.

1. From the Main Menu press the  (down) key until Timed Events is highlighted then press the  (Edit) key.
2. Once in the Timed Events menu press the  (down) key to highlight Sanitation Events Menu then press the  (Edit) key. The LCD will display the screen as shown.

Sanitation Events Menu			
1	Timed	Off	
2	Timed	Off	
3	Timed	Off	
4	Timed	Off	
5	Timed	Off	
6	Timed	Off	

The following example describes how the engineer can program a timed event to flush the water system at 07.00 am, everyday.

1. To set up the first timed flush, press the  (Edit) key to access the 1 Timed sub menu. The LCD will change and display the screen as shown. By default the current State is set to Off as indicated by the status line at the bottom of the screen.
2. Press the  (Edit) key to access the State sub menu. Using the  (down) key, set the state to On (indicated by the filled radio button). Press the  (Edit) key to return to the 1 (Timed) screen. Verify that the status line confirms the State is set to On.

1
State
Event Type
Start Time
Days Of Week
Off

State
<input type="radio"/> Off
<input checked="" type="radio"/> On

3. Press the ▼ (down) key to highlight Event Type. By default the event is set to Timed as indicated by the text displayed in the status line at the bottom of the screen. Therefore it is not necessary for the engineer to enter this sub menu.

1	
State	▲
Event Type	
Start Time	
Days Of Week	▼
Timed	

4. Press the ▼ (down) key to highlight Start Time and press the ↵ (Edit) key. From this menu the engineer sets the time at which the the sanitation event will start. Using the drink selection keypad, press the sequence 0-7-0-0 to set the time. If necessary use the ▲ (up) or ▼ (down) key until AM appears in the dotted box.

Start Time	
hh / mm / mode: 12 / 24	
07	: 00 AM
Press Ar rows To Select	

5. Press the ↵ (Edit) key to return to the 1 (Timed) screen. Verify that the correct start time is displayed in the status line at the bottom of the screen.

6. Press the ▼ (down) key to highlight Days Of Week and press the ↵ (Edit) key. From this menu the engineer can set the days on which the sanitation event will take place. To select everyday (Monday - Sunday), press the START key on the drink selection keypad. The program automatically places an X in every box indicating that each day is selected.

Days of Week	
<input checked="" type="checkbox"/> Monday	▲
<input checked="" type="checkbox"/> Tuesday	
<input checked="" type="checkbox"/> Wednesday	
<input checked="" type="checkbox"/> Thursday	
<input checked="" type="checkbox"/> Friday	▼
Start = Set or Clear All	

**N.B.** To select individual days, scroll through the menu using the ▲ (up) or ▼ (down) keys until the required day is highlighted. Press the ↵ (Edit) key to select the day, indicated by an X appearing in its adjacent box.

7. Press the X (Exit) key three times to return to the Timed Events Menu. Using the sequence described above the engineer can quickly and easily set up additional sanitation event periods for the machine.

It is also possible for the engineer to program up to six post vend sanitation events. The following example describes how the engineer can program a post vend event to flush the water system 12 minutes after the last vend.

- From the Main Menu press the ▼ (down) key until Timed Events is highlighted then press the ↵ (Edit) key. Once in the Timed Events menu press the ▼ (down) key to highlight Sanitation Events Menu then press the ↵ (Edit) key. Press the ▼ (down) key until the first Post Vend event is highlighted. The LCD will display the screen as shown.

Sanitation Events Menu			
2	Timed	Off	▲
3	Timed	Off	
4	Timed	Off	
5	Timed	Off	
6	Timed	Off	
7	Post Vend	Off	▼

- With Post Vend highlighted, press the ↵ (Edit) key to access the 7 Post Vend sub menu. The LCD will change and display the screen as shown. By default the current State is set to Off as indicated by the status line at the bottom of the screen.

7	
State	▲
Event Type	
Delay	▼
Off	

- Press the ↵ (Edit) key to access the State sub menu. Using the ▼ (down) key, set the state to On (indicated by the filled radio button). Press the ↵ (Edit) key to return to the 7 (Post Vend) screen. Verify that the status line confirms the State is set to On.

State	
<input type="radio"/> Off	▲
<input checked="" type="radio"/> On	
	▼

- Press the ▼ (down) key to highlight Event Type. By default the event is set to Timed as indicated by the text displayed in the status line at the bottom of the screen. Therefore it is not necessary for the engineer to enter this sub menu.

7	
State	▲
Event Type	
Delay	▼
Post Vend	

- Press the ▼ (down) key to highlight Delay. The status line indicates the factory default delay which is set to 0.1hrs (6 minutes). To change the value so that the machine will self clean 12 minutes after a drink is vended press the ↵ (Edit) key to access the Delay sub menu. The LCD will display the screen as shown. Using the drink selection keypad, press the sequence 0-0-2 to set the new delay.

Delay	
00.2	
0-9 to Edit Value Edit w hen Finish ed	

Press the ↵ (Edit) key and verify that the status line confirms that Delay (when highlighted) is set to 0.2hrs.

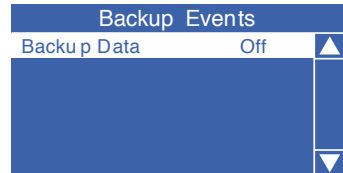
- Press the **X** (Exit) key three times to return to the Timed Events Menu. Using the sequence described above the engineer can quickly and easily set up additional post vend sanitation event periods for the machine if required.

**N.B.** A sanitation event, either timed or post vend, dispenses water into the drip tray. If the tray reaches its full limit the machine will be 'Out Of Service'.

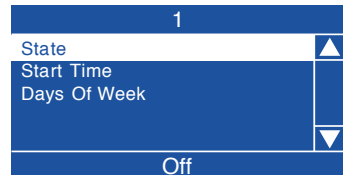
#### 4.10.3 Backup Events Menu

This sub menu allows the engineer to program the machine to perform an automatic backup of all user configurable settings and sales data stored in its memory. The default setting for Backup Events is Off.

- From the Main Menu press the ▼ (down) key until Timed Events is highlighted then press the ↵ (Edit) key.
- Once in the Timed Events menu press the ▼ (down) key twice to highlight Backup Events Menu then press the ↵ (Edit) key. The LCD will display the screen as shown.



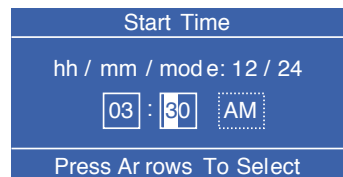
- Press the ↵ (Edit) key to access the 1 Backup Data sub menu. The LCD will change and display the screen as shown. By default the current State is set to Off as indicated by the status line at the bottom of the screen.



- Press the ↵ (Edit) key to access the State sub menu. Using the ▼ (down) key, set the state to On (indicated by the filled radio button). Press the ↵ (Edit) key and verify that the status line confirms the State is set to On.



- Press the ▼ (down) key to highlight Start Time and press the ↵ (Edit) key. Using the drink selection keypad, set the time at which the Backup event will start. If necessary use the ▲ (up) or ▼ (down) key until AM appears in the dotted box.



- Press the ↵ (Edit) key and verify that the correct start time is displayed in the status line at the bottom of the screen.

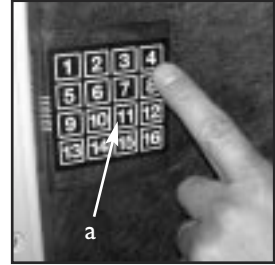
7. Press the ▼ (down) key to highlight Days Of Week and press the ↵ (Edit) key. From this menu the engineer can set the days on which the Backup event will take place. To select everyday (Monday - Sunday), press the START key on the drink selection keypad. The program automatically places an X in every box indicating that each day is selected.

Days of Week	
<input checked="" type="checkbox"/>	Monday
<input checked="" type="checkbox"/>	Tuesday
<input checked="" type="checkbox"/>	Wednes day
<input checked="" type="checkbox"/>	Thursday
<input checked="" type="checkbox"/>	Friday
Start = Set or Clear All	

**N.B.** To select individual days, scroll through the menu using the ▲ (up) or ▼ (down) keys until the required day is highlighted. Press the ↵ (Edit) key to select the day, indicated by an X appearing in its adjacent box.

## Section 5 - Service Keypad Functions

Genesis machines are fitted with a service keypad (a) mounted on the rear of the door. This keypad contains the **Operators Program** entry key and also allows the operator to carry out specific functions during routine cleaning and maintenance.



**N.B.** During certain operations e.g. **View Counters** it is necessary for the operator to utilise the selection keypad and LCD mounted on the front of the door to access data. Please refer to Section 3 - [Programming Mode](#) (see page 18) for details of selection keypad layout and functions.

When the safety key is inserted into the door switch and the machine is switched **on**, the service keypad allows the operator to carry out the following functions:

### 5.1 Button 1 - Program Entry

This button enables the engineer to access the [Engineers Program](#) (see page 21).

### 5.2 Button 2 - Brewer Open (Freshbrew Machines)

This button operates the brewer fitted to freshbrew machines and enables the operator to remove the brewer chambers/wipe arms assembly for cleaning purposes. Press and release the button and then press and hold to index the brewer to the fully open position.

### 5.3 Button 3 - Rinse/Flush

1. The flush sequence operates automatically and rinses the mixing bowls. Before the sequence begins, the system waits until the water in the boiler is at the correct temperature determined by the thermistor.
2. **Instant/Freshbrew Machines:** In order to guarantee the highest standards of cleanliness, the boiler fill valve is disabled, ensuring that the water used in the sequence is delivered at the optimum temperature to kill any micro-organisms.
3. Each hot water valve and the corresponding whipper is switched on in sequence for a pre-set flush time. Once the flush cycle is complete the machine returns to standby mode, ready to vend.
4. To flush the machine:
  - a. Open the front door of the machine and insert the safety key.



**Caution:** Ensure that a water tight container is placed under the dispense position. Keep hands away from the dispense area whilst the flushing cycle is in operation.



- b. Press and release the **Flush** (button 3). The flush sequence begins.
- c. Empty the waste water container when complete.

## 5.4 Button 4 - Brewer Clean (Freshbrew Machines)

The brewer clean button enables the brewer to be cleaned independently. In order to guarantee the highest standards of cleanliness, the boiler fill valve is disabled, ensuring that the water used is delivered at the optimum temperature to kill any micro-organisms.

1. The brewer unit is filled with hot water and then operated through four complete brew cycles.
2. During the cleaning cycle the LCD will display the message as shown.
3. Once the cleaning cycle is complete, the boiler refills and when the water is at the correct temperature, the machine returns to standby mode, ready to vend.

**Sorry Out  
of Service  
Rinsing**

## 5.5 Button 5 - View Counters

This button enables the operator to access the Data Recall Menu. Entry into this menu allows the operator to view Non-Resettable and Resettable Sales Data, view data relating to Timed Events and Identification Numbers of installed components and (if feature enabled) view SureVend™ assisted vend information. The [Resettable Sales Data](#) and [SureVend™ Data](#) menus contain an extra sub-menu which allows the operator to delete the current data from the machines memory. Full details relating to these menus and contents see pages 24-26.

## 5.6 Button 6 - Test Vend

This button enables the operator to vend a drink from the machine to ensure correct operation after cleaning or maintenance.

1. When the button is pressed and released the LCD will display the screen as shown opposite. The operator then presses a drink selection button followed by the **START** button to begin the vend sequence.
2. Ensure that the selection is correct, has not under/overfilled the cup and most importantly, tastes good.
3. Press the **X** (Exit) key on the drink selection keypad to exit from the Test menu and return to stand-by mode.

Test Vend	
Insert Money	
or	
Make a Selection	
Credit .00	

## 5.7 Button 7 - Cup Test

This button enables the operator to test the operation of the cup drop unit after refilling the cup stacks. When the button is pressed the cup drop solenoid is operated and a cup is ejected from the cup drop unit. This function ensures that the mechanism is working correctly.

## 5.8 Button 8 - Park Head

When this button is pressed, the dispense head moves to its fully extended position and stops. Press the button again to return the dispense head to its correct (homed) position.

**N.B.** It is necessary for the operator to wait for a few seconds between each key press to allow the machine to respond accordingly.

## 5.9 Button 9 - Boiler Fill (B2C Machines)

When this button is pressed, the machine pumps a measured amount of water through the system - approximately 400ml, heating it as it does so. This ensures that heated water is immediately available when a drink is selected. This button should also be used to purge any water left in the system after the machine has been moved or shut down for any length of time.

## 5.10 Button 10 - Machine Cool Down (B2C Machines)

This button enables an engineer to work safely on the water system and should not be used by the operator.

## 5.11 Button 11 - CoEx® Tablet Clean (B2C Machines)

This button initiates the CoEx® brewer tablet cleaning routine. CMS recommends that this brewer cleaning routine should be carried out on a **weekly** basis.

During the cleaning routine the LCD displays the message 'Cleaning in progress'.

## 5.12 Button 12 - Reset Waste Counter (FB & B2C Machines)

Every time that the brewer waste container is emptied the waste counter must be reset. Press button 12 on the service keypad to reset the counter. Two audible bleeps confirm that the counter has been reset to zero.

## 5.13 Button 13 -

This button is not currently used in the Genesis machine.

## 5.14 Button 14 - Clear SureVend™ Error

This button enables the operator to simply and quickly clear SureVend™ errors caused by cup failures.

## Section 6 - The Vend Cycle

### 6.1 Standby Mode

In standby mode the machine is idle, awaiting input from the drink selection keypad. The LCD will display to the customer one of a number of messages indicating the credit mechanism of the machine, the coin set, the time and if appropriate water temperature. The messages displayed are determined by the type of coin system which has been programmed via the [System Settings menu](#) (see page 47).

The credit mechanism is indicated by one of the following prompts:

1. **'No Money Required'** - indicates that a free vend tariff is in force.
2. **'Please Insert Card'** - indicates that a card system is attached.
3. **'Please Insert Coins'** - indicates that a coin mechanism is connected.
4. **'Please Insert Key'** - indicates that the machine is fitted with a key system.

In addition, the prompts 'Exact Change Please' or 'No Change Given' inform the customer whether change is available. If the mechanism is set to acceptor, the 'No Change Given' message will always be displayed. If the mechanism is set to change-giver, the prompt will depend upon how full the change tubes are. For more information please refer to the manual supplied with the Change-giver.

The coin set accepted by the coin mechanism is also displayed. This is pre-set in the controller and outlined in the section covering the programming of the coin set in the engineer's program.

### 6.2 Selecting A Drink

Drink selections are made by pressing the appropriate selection button on the keypad and then utilising the keypad selection buttons and the LCD display to alter the drink strength and add milk/sugar to suit the customers personal preference. When in standby mode, all drink selection buttons will be lit indicating that the drink is available to be selected. At this time the Milk, Sugar and Start buttons are not lit.

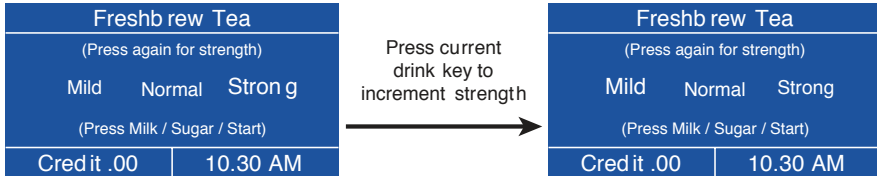
The following example describes how to vend a Freshbrew Tea selection from a freshbrew machine set to 'Free Vend'.

1. Press selection button 3, **Freshbrew Tea** on the keypad. All of the other selections buttons will be extinguished, the Milk, Sugar and Start buttons will light up and the machine exits from standby mode. The LCD will display the screen as shown opposite.

Freshbre w Tea	
(Press again for strength)	
Mild	Normal Strong
(Press Milk / Sugar / Start)	
Credit .00	10.30 AM

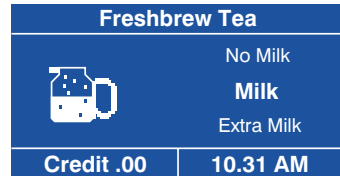
**N.B.** The default strength setting for this drink selection is **Normal** as shown.

- To obtain a **Strong** or **Mild** beverage it is necessary to press the current drink selection button. Pressing once will toggle to the **Strong** selection. Pressing the button again will toggle to the **Mild** selection.

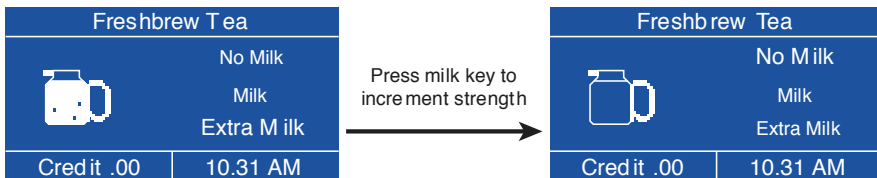


Pressing the current drink selection button again will revert to the Normal screen.

- If milk and/or sugar is required, it is necessary to press the corresponding button on the keypad for each selection. When the Milk button is pressed the LCD changes and displays the default screen as shown opposite.

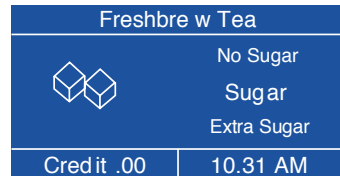


- If **Extra Milk** is required the customer presses the milk button a second time. A third press will display the **No Milk** selection.

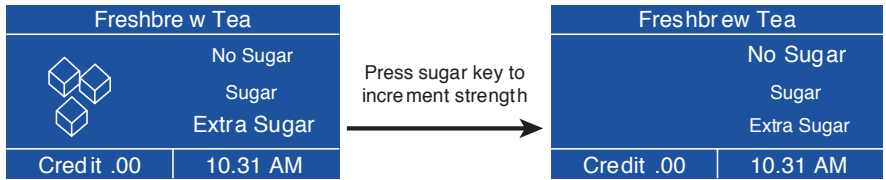


Pressing the milk button again will revert to the Milk selection.

- If the customer requires sugar it is necessary to press the sugar button. The LCD changes and displays the default screen shown opposite.



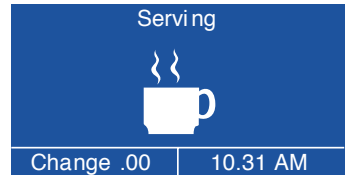
6. If **Extra Sugar** is required the customer presses the sugar button a second time. A third press will display the **No Sugar** selection.



Pressing the sugar button again will revert to the Sugar selection.

7. Once the required drink has been selected, press the Start button on the keypad. All lit buttons will be extinguished apart from the drink selection button which flashes indicating that the drink is being vended.

Unless the customer has placed their own cup into the dispense area, a cup will automatically be ejected from the cup drop unit into the dispense area and the drink selection will be delivered into the cup. Whilst this operation is in progress the LCD will display the screen shown opposite.



8. After the beverage has been dispensed the LCD will display the message **Thank You** and the machine will beep once. The message on the display will change to read **Please remove cup**. The drink can then be carefully removed from the dispense area and the machine will return to standby mode.
9. Certain drink selections do not allow the strength option to be selected or milk added. For example, if the customer presses the **Cappuccino** selection button, all of the other selection buttons will be extinguished, the Sugar and START buttons will light up and the LCD will display the screen opposite. The customer can either press the START button to vend the drink or first press the sugar button in order to add sugar to their taste as described above.



10. Other drink choices do not allow the strength option or milk/sugar to be selected. For example, if the customer presses the **Chocolate** selection button, all of the other selection buttons will be extinguished, the START buttons will light up and the LCD will display the screen opposite. The customer simply presses the START button and the machine will vend the drink as described above.



### 6.3 Replacing/Updating Drink Selection Decals

Drink selection and pricing decals are mounted onto a paper backing sheet which is secured behind a transparent clip-in cover.

To update drink pricing or replace drink description decals, proceed as follows:

1. Carefully unclip the transparent decal cover from the door using the snap fit clip at the top. Remove the decal sheet from its holder as shown opposite.
2. **Updating pricing:** Carefully remove the previous price decals from the drink selection decals. Update the prices where necessary using new self adhesive decals (Refer to [Spare Parts Section 13](#) for part numbers).
3. **Updating drink selections and pricing:** When updating selection decals and prices it will be necessary to use a new backing sheet. These are available as spares from the manufacturer, see the [Console Assembly](#) parts list (see page 141) to find the part number.



Peel the relevant drink selection decals from their backing sheet and apply to the backing sheet using the printed guides as shown opposite. These are available as spares from the manufacturer, see the [Console Assembly](#) parts list (see page 141) to find the part number.



Apply price decals as described above.

4. Place the decal carrier behind the transparent decal cover and refit complete assembly to the door. Ensure decal cover locating lugs are correctly located before pushing the snap fit clip into place.

## Section 7 - Technical Information

### 7.1 Water Services

The mains water supply provides water for the heater tank fitted in Instant & Freshbrew machines, or the pressure system fitted to Espresso (B2C) machines. Water enters at the rear of the machine through a solenoid operated inlet valve operating at 24v DC, which opens or closes the water supply as required.

### 7.2 Hot Water System

#### Instant and Freshbrew Machines

1. Water is heated in the heater tank to the required temperature by a heating element rated at 2.4 Kilowatts. The mains voltage required for the element is switched by a solid state relay, controlled by the vending machine controller via an analogue signal transmitted by the thermistor probe.
2. The water level inside the heater tank is controlled by a water level probe. When the water drops below the required level, the controller board operates the mains water inlet valve until the required water level is restored.
3. A series of 24v DC control valves are mounted on the outside of the heater tank. These supply heated water to each of the mixing stations where ingredients are added to make the drink. The “hot water” valve dispenses straight into the cup.
4. Should the inlet valve fail (or mains water supply be disabled), the controller board will detect a fault after the inlet valve ‘open’ signal has been active for 2 minutes and the required water level has not been reached. At this point the keypad will be disabled, all outputs from the controller board (including the heater element) will be switched off and the LCD will show the message opposite.

Sorry Out of Service  
Fill Time out

**N.B.** An illustration showing the parts breakdown for the [Boiler Assembly](#) is included in Section 13 - Spare Parts (see page 171).

#### B2C (Espresso) Machines

The water system fitted to [B2C machines](#) is described in detail in Section 8 of this manual (see page 82).

## 7.3 Ingredient Dispense

1. The ingredients required for making up either an instant or freshbrew drink are contained in ingredient canisters and are dispensed by means of an auger located in the base of each canister. Each auger is driven by a 24v DC 130 rpm motor.
2. The amount of product dispensed by each canister is controlled by the vending machine controller and may be adjusted via the [Selection Timers menu](#) (see page 34) in the Engineers Program.
3. The required ingredients for each vend are delivered to a mixing bowl, where they are blended with hot water by a high speed whipper prior to discharge at the dispense head.
4. To ensure a free flow of ingredient powder and granules, it is essential that they are kept completely dry. This is achieved by extracting steam from the mixing system using an extract fan. The electrical supply for the extract fan is 230v AC.

**N.B.** The fan runs continuously whilst the cabinet door switch is in the on position.

5. Espresso (B2C) machines: Coffee beans are stored in a bean container which is fitted with a sealable lid to keep the beans fresh and are dispensed into the CoEx® Brewer via a grinder located under the bean container outlet.

The amount of beans dispensed from the container is controlled by the vending machine controller and may be adjusted via timing constraints set in the [Selection Timers menu](#) (see page 34) of the Engineers Program.

## 7.4 Mixing System

1. The mixing system utilises a 24v DC 13,000 RPM motor assembly and mixes ingredient with hot water from the heater tank to make a drink.
2. The mixing units are front mounted and secured by a single fixing screw. For servicing, the complete unit can be quickly and easily removed from the front of the machine.

**N.B.** An illustration showing the parts breakdown for the [Mixing System](#) is included in Section 13 - Spare Parts (see page 173).

## 7.5 Moving Dispense Head

1. Genesis machines are fitted with a moving dispense head mechanism. This allows for a quicker and more direct cup drop and also helps to prevent cross contamination of drinks. The head features three separate dispense positions depending upon the drink being dispensed.



2. The mechanism is operated by a 24v DC 50 RPM motor. The motor is connected to a pinion which engages with a rack on the dispense arm. This mechanism is used to move the dispense head backwards and forwards.
3. A micro switch, fitted to the rear of the dispense head chassis detects the home position (head withdrawn/not dispensing). An optical sensor is also fitted and this works in conjunction with a decoder bracket attached to the rack to determine the position of the dispense head.
4. A moulded dispense head mounted at the front of the unit connects the tubes from the various mixing systems, brewers and hot water, to separate dispense nozzles. The three positions of the dispense head ensure the required dispense nozzles are positioned over the cup.

**N.B.** An illustration showing the parts breakdown for the [Moving Dispense Head](#) is included in Section 13 - Spare Parts (page 169). [Dispense Pipe Lengths](#) are shown in Section 11 (page 113).

## 7.6 Cup Dispense Unit

1. Cups (either paper or plastic) are stored in tubes which are located above the cup dispense unit. The unit incorporates a 24v DC, 2.2 r.p.m. motor for Indexing the correct turret over the cup drop unit as required.
2. When a selection is made the Main Controller checks that the cups are not sold out, a 230v AC solenoid is energised and a cup is dispensed.
3. The cups are separated and 'dropped' by a cup ring. The cup ring comprises six separator cams operated by a solenoid, which is controlled by the vending machine controller.
4. The cup level is monitored by an electronic system. An infrared LED (cup sensor transmitter) is positioned in the cup assembly above the cup splitter, with an infrared detector (cup sensor receiver) mounted directly opposite.
5. The light emitted by the LED is detected when NO CUPS are present. With a stack of cups present, the beam is broken. As the cups drop below the LED, transmitted light is detected. If this is the case, the controller will index the cup tubes until a full stack is located. A turret location micro-switch ensures that the cup tubes stop centrally over the cup ring.

**N.B.** The turret motor will run until the next stack is deposited into the cup splitter, which breaks the LED beam, and the cup stack micro switch returns to its normally open state. The motor will run until it either finds the next stack or all the turret extrusions have been checked.

6. The cup stack index motor is protected by a time-out feature. The motor will rotate for a maximum period of 60 seconds. If at the end of this

period no cups have been detected the machine will display the “Out of Cups” message.

**N.B.** An illustration showing the parts breakdown for the [Cup Drop Unit](#) is included in Section 13 - Spare Parts (see page 159).

## 7.7 Waste Level Probes

1. The waste level probes, fitted to the underside of the machine, detect the water level in the waste tray.
2. The system consists of two springs set at different levels. When the water level is high enough that both of the springs are immersed in the water a message is displayed on the machine saying the waste tray is full and the machine is disabled.

## 7.8 Brewer Unit (Freshbrew Machines)

The dual brewer unit provides both freshly brewed coffee and tea. The coffee and tea ingredients are dispensed into the brewer unit via separate canisters.

A 24v DC, 3.5 RPM motor, controlled by an index cam fitted to the drive shaft, operates the brewer unit. The cam operates a switch which sends a logic signal to the controller when the brewer is in the correct position. The brewer motor will timeout after 60 secs if the home switch is not seen.

### Coffee Brewing

1. Water and coffee grounds are dispensed into the coffee brewing chamber. The motor drives the piston up and mixes the coffee and water.
2. The motor drives the piston down and the resulting vacuum pulls filtered coffee through the filter mesh. As the piston passes the coffee outlet adaptor, coffee flows to the dispense head. The piston remains in this position for a while to allow the coffee to drain away.

**N.B.** There are 4 programmable delay positions which can be set via the freshbrew coffee selection timers. These delays are at zero by default but could be increased to gain maximum extraction.

3. A separate mechanism removes the coffee grounds. The coffee wipe arm wipes the grounds from the filter mesh. They then drop, via a deflector tray, into a waste bucket. The motor returns the piston to its parked position.

### Tea Brewing

4. Water and tea are dispensed into the tea brewing chamber. The brewer stays shut until the required amount of water has passed through the system. When the tea chamber is empty, the motor operates the wiper arm and the used tea cake is removed from the tea filter mesh.

## 7.9 CoEx® Brewer (B2C Machines)

The unique CoEx® combined coffee and espresso brewer provides both freshly brewed coffee along with fresh coffee from beans through the same unit. The unit is driven by a 24v DC, 13 RPM motor, controlled by a micro switch. The switch sends logic signals to the controller during vend and initialise operations, indicating its position.

Please refer to Section 8 for full details of the CoEx® brewer and its operation.

## 7.10 Teapot

The teapot is a pour over style brewer with a double rotation 'dump' mechanism. The unit is driven by a 24v DC 14 RPM motor and controlled by a micro switch.

### Tea Brewing

Water and tea are dispensed into the brewer, the water is dispensed in two parts with a one second pause between. This is to allow the tea to steep hence giving a fuller flavoured drink. When the water valve turns off the brewer waits for 7 seconds to allow all the liquid to exit the brewer. At this point the brewer rotates twice, dumping the used tealeafs into the brewer waste container.

## 7.11 Power Supply Unit

1. The power supply unit (PSU) provides power to the machine. It is mounted on the PSU chassis on the left hand side of the machine and can be accessed by removing the lower front panel.
2. The PSU converts 230v AC to 24v DC to run the valves, whipper motors, ingredient motors, brewer motors, etc. fitted to the machine. The solid state relay, mounted on the PSU chassis, uses a 24v DC switching circuit to provide 230v AC for the heater element.
3. The Input/Output (I/O) board, mounted on the PSU chassis, utilises signals from the main controller in order to operate valves, whipper motors, the dispense head motor, ingredient motors, brewer motors, etc.
4. The PSU houses three fuses. These are as follows.
  - Heater, 12 amp T (ceramic)
  - 240v Auxiliary, 4 amp (glass)
  - 240v PSU, 4 amp (glass)

**N.B.** An illustration showing the parts breakdown for the [PSU](#) is included in Section 13 - Spare Parts (see page 175).

## 7.12 16 Amp Filter

A 16 Amp filter, mounted on the rear panel, prevents spurious voltages reaching the power supply, I/O board, controller boards and other sensitive components within the machine. It also prevents spurious voltages generated by the machine from reaching the mains supply.

## 7.13 Coin Mechanism Transformer

The coin mechanism transformer converts 230v AC to 24v AC for Executive protocol type coin mechanisms. The 24v AC supply is protected by an in-line 4 amp, glass fuse, which is located in the door assembly above the coin mechanism.

## 7.14 Coin and Card/Key Systems

The Genesis may be equipped with coin or card/key validation systems using either protocol 'A' or alternatively an MDB system. The coin or card/key system informs the vending machine controller of the amount of credit which has been deposited into the vending machine.

## 7.15 Change Giver

1. The Change Giver communicates with the vending machine controller through a serial communication interface. It will validate a coin and if accepted, send a signal to the vending machine controller indicating the total amount of money which has been tendered since the last vend.
2. Once sufficient credit has been accumulated a vend will be permitted. Where possible the change giver will return the appropriate amount of change to the customer.

## 7.16 Coin Blocker

For Genesis machines fitted with a change-giver, a logic 'low' level from the vending machine controller will disable any coin acceptance.

## 7.17 Card/Key System

1. The card system fitted to the machine communicates with the vending machine controller using the same principle as the change giver.
2. The card system informs the vending machine controller of the amount of credit on the customer's card. If there is sufficient credit for the selected drink, the vending machine controller permits a vend and informs the card system of the amount of credit to be taken from the card. The new balance will then be re-written onto the customer's card.

**N.B.** For full information and programming instructions for all of these systems, please refer to the user manual supplied with the validation system.

## Section 8 - B2C (Espresso) System

Genesis B2C machines are capable of producing high quality espresso based drinks through the unique CoEx® brewer unit either independently (Espresso, Americano), or in conjunction with the soluble product (Cappuccino, Caffè Mocha etc). The machine can also vend high quality freshbrew coffee from pre-ground product.

### 8.1 Example Vend

When an Espresso drink is selected the following sequence occurs:-

1. The customer selects an espresso drink. Fresh beans are delivered into the grinder and the grinder is operated for a pre-determined time. Ground coffee is deposited into the CoEx® brewer.
2. The brewer moves to the vend position. The brewer motor starts running clockwise, causing the filter assembly to cover the piston chamber and the piston to move upwards, forming the ground coffee into a compressed pellet as it does so.
3. When the heater reaches the correct temperature the inlet valve is opened and the 3 bar pressure relief valve closed. At the same time the pumps will start pumping water through the system and into the brewer.
4. Whilst water is passing through the system a water flow meter will send pulses back to the main controller and the espresso selection will be delivered into the cup.
5. Once the required amount of water has been pumped through the system, the inlet valve closes and the pumps stop pumping water through the system. The brewer compresses the used coffee pellet, the pressure relief valve is opened and the espresso valve switched on.
6. The brewer motor reverses and drives the piston back up to the top of the chamber. The wiper mechanism ejects the used coffee pellet into the dry waste container and the brewer piston moves back to the stand-by position.

### 8.2 System Overview

**N.B.** A diagram illustrating the [water system](#) fitted to Genesis B2C machines is included at the end of this section (see page 85).

**Important!** The machine must be operated in conjunction with a water filter of food grade quality, capable of removing temporary hardness (scale), heavy metals (lead, copper, iron, cadmium), chlorine and any organic pollutants/discolouration. Crane Merchandising Systems recommend the Brita AquaQuell compact water filter for use with Genesis B2C machines.

### **(1) Water Inlet Valve**

A 24V dc single solenoid water inlet valve. When a drink is selected the inlet valve is opened. At the same time the pumps are operated, pumping water through the system.

### **(2) Reducing Valve**

An inline reducing valve maintains water pressure to the pumps at 0.5 bar.

### **(3) Vibration Pumps - 230V ac**

When a drink is selected the pumps switch on at the appropriate moment until the required amount of water has been pumped through the system.

### **(4) Flow Meter**

As water flows through the system, the flow meter sends pulses back to the control board.

### **(5) Pressure Boiler**

The pressure boiler has a capacity of 350ml and is fitted with a 2kW heating element. Cold water is diffused as it enters the boiler through the lower coupling. Heated water exits the boiler through the top coupling. A resettable temperature cut-out, set to operate at 120°C is mounted externally near the top of the boiler and acts as a safety feature. A thermistor is mounted on the front of the boiler to measure water temperature.

### **(6) Espresso Valve**

Supplies heated water to the CoEx® brewer when an espresso or freshbrew drink has been selected.

### **(7) Pressure Valve**

This valve is normally open exposing the system to the 3 bar mechanical relief valve. It is closed during vends to allow higher pressures to be achieved within the system.

### **(8) Relief Valve - 3 Bar (Mechanical)**

The 3 bar pressure valve is a mechanical safety valve. The valve allows for heat expansion while the machine is in stand-by mode.

### **(9) Safety Valve - 12 Bar (Mechanical)**

This valve provides overall system safety. The valve will open should the pressure within the system exceed 12 bar.

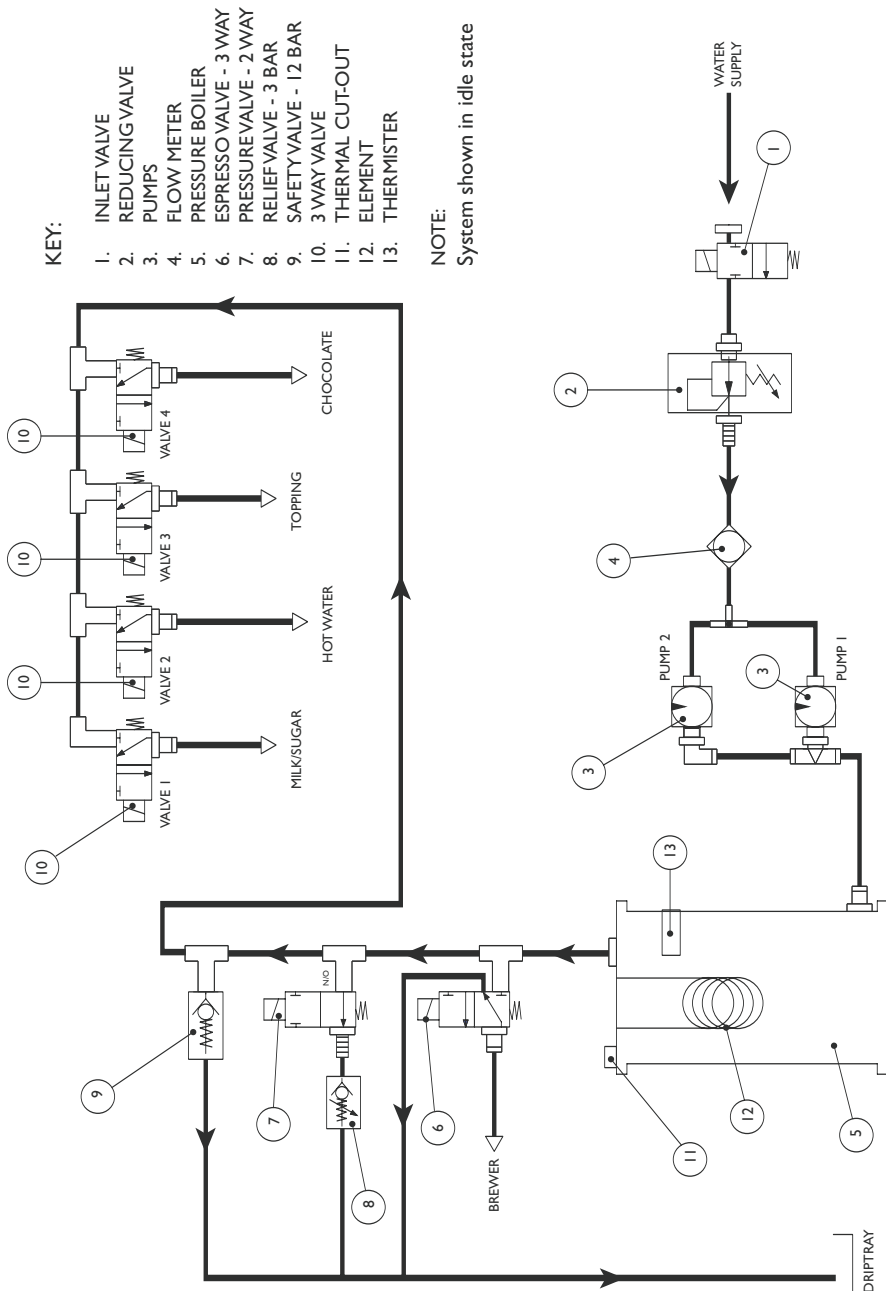
### **Grinder Mechanism (Not Shown On Water Flow Diagram)**

The grind mechanism consists of a 230V ac conical grinder with a manual adjustment. When an espresso based drink is selected the grinder will run for the required time, grinding beans and feeding the brewer. The grinder is fitted with a manual adjusting mechanism which allows the engineer to vary the size of the ground coffee in order to satisfy customers' taste preferences.

### **CoEx® Brewer (Not Shown On Water Flow Diagram)**

The brewer unit is capable of receiving between 5 and 9 grams of ground coffee. Once the coffee has been ground and dispensed into the brewer unit, the 24V dc brewer motor drives the brewer to the vend position using the current sensing as control. Once the coffee has been compressed into a 'cake', water is pumped through the brewer. When the required amount of water has passed through the brewer, the now wet coffee 'cake' is squeezed, removing most of the water from the 'cake', preventing the brewer becoming unnecessarily dirty. After the 'cake' has been squeezed the brewer will deposit the cake into the dry waste container and return to the stand-by position.

## 8.3 Genesis B2C Water Flow Diagram





## Section 9 - Pre-Set Drink Timings

The tables on the following pages illustrate the pre-set timings for all drink selections with which the machine leaves the factory. These values may be changed from within the [Product Configuration Menu](#) (see page 34), accessed via the engineers program.

### 9.1 Instant - Option 1 (Two Coffee Selections)

Coffee	Preset	Coffee (Decaff)	Preset	Tea	Preset
Hot Water (Coffee)	4.00	Hot Water (Coffee)	4.00	Hot Water (Coffee)	4.00
Ingredient - 1	1.00	Ingredient - 1	1.00	Ingredient - 1	1.00
Ingredient - 2	1.50	Ingredient - 2	1.50	Ingredient - 2	1.50
Ingredient - 3	0.75	Ingredient - 3	0.75	Ingredient - 3	0.75
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	4.50	Whipper Time	4.50	Hot Water (Milk)	2.00
Whipper Delay	0.50	Whipper Delay	0.50	Ingredient - 1	0.75
Hot Water (Milk)	2.00	Hot Water (Milk)	2.00	Ingredient - 2	1.10
Ingredient - 1	0.75	Ingredient - 1	0.75	Product Delay	1.00
Ingredient - 2	1.10	Ingredient - 2	1.10	Whipper Time	2.50
Product Delay	1.00	Product Delay	1.00	Whipper Delay	0.50
Whipper Time	2.50	Whipper Time	2.50	Hot Water (Sugar)	2.00
Whipper Delay	0.50	Whipper Delay	0.50	Ingredient - 1	1.10
Hot Water (Sugar)	2.00	Hot Water (Sugar)	2.00	Ingredient - 2	1.50
Ingredient - 1	1.10	Ingredient - 1	1.10	Product Delay	1.00
Ingredient - 2	1.50	Ingredient - 2	1.50	Whipper Time	2.50
Product Delay	1.00	Product Delay	1.00	Whipper Delay	0.50
Whipper Time	2.50	Whipper Time	2.50		
Whipper Delay	0.50	Whipper Delay	0.50		
Latte	Preset	Cappuccino	Preset	Caffe Mocha	Preset
Hot Water (Coffee)	2.50	Hot Water (Milk)	3.50	Hot Water (Choc)	3.25
Ingredient	1.00	Ingredient	2.00	Ingredient	2.75
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	3.00	Whipper Time	4.00	Whipper Time	3.75
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	3.50	Hot Water (Sugar)	2.00	Hot Water (Milk)	1.80
Topping Ingredient	3.00	Ingredient - 1	1.00	Ingredient	0.85
Product Delay	1.00	Ingredient - 2	1.50	Product Delay	1.00
Whipper Time	4.00	Product Delay	1.00	Whipper Time	2.30
Whipper Delay	0.50	Whipper Time	2.50	Whipper Delay	0.50
Hot Water (Sugar)	2.00	Whipper Delay	0.50	Hot Water (Sugar)	1.50
Ingredient - 1	1.00	Hot Water (Coffee)	2.00	Ingredient	1.00
Ingredient - 2	1.50	Ingredient	2.00	Product Delay	1.00
Product Delay	1.00	Product Delay	1.00	Whipper Time	2.00
Whipper Time	2.50	Whipper Time	3.00	Whipper Delay	0.50
Whipper Delay	0.50	Whipper Delay	0.50		

Chocomilk	Preset	Espresso	Preset	Chocolate	Preset
Hot Water (Choc)	4.25	Hot Water (Coffee)	3.25	Hot Water	7.50
Ingredient	2.75	Ingredient	1.50	Ingredient	2.75
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	4.75	Whipper Time	3.75	Whipper Time	8.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	2.75	Hot Water (Sugar)	1.75		
Ingredient	0.85	Ingredient - 1	0.50		
Product Delay	1.00	Ingredient - 2	1.00		
Whipper Time	3.25	Product Delay	1.00		
Whipper Delay	0.50	Whipper Time	2.25		
		Whipper Delay	0.50		

Hot Milk	Preset	Hot Water	Preset
Hot Water	7.50	Water	8.00
Ingredient	1.50		
Product Delay	1.00		
Whipper Time	8.50		
Whipper Delay	0.50		

## 9.2 Instant - Option 2 (Soup and Instant Coffee)

Coffee	Preset	Tea	Preset	Cappuccino	Preset
Hot Water (Coffee)	4.00	Hot Water (Tea)	4.00	Hot Water (Milk)	3.50
Ingredient - 1	1.00	Ingredient - 1	0.50	Ingredient	2.00
Ingredient - 2	1.50	Ingredient - 2	0.75	Product Delay	1.00
Ingredient - 3	0.75	Ingredient - 3	0.35	Whipper Time	4.00
Product Delay	1.00	Product Delay	1.00	Whipper Delay	0.50
Whipper Time	4.50	Hot Water (Milk)	2.00	Hot Water (Sugar)	2.00
Whipper Delay	0.50	Ingredient - 1	0.40	Ingredient - 1	1.00
Hot Water (Milk)	2.00	Ingredient - 2	0.60	Ingredient - 2	1.50
Ingredient - 1	0.75	Product Delay	1.00	Product Delay	1.00
Ingredient - 2	1.10	Whipper Time	0.00	Whipper Time	2.50
Product Delay	1.00	Whipper Delay	0.00	Whipper Delay	0.50
Whipper Time	2.50	Hot Water (Sugar)	2.00	Hot Water (Coffee)	2.50
Whipper Delay	0.50	Ingredient - 1	0.60	Ingredient	2.00
Hot Water (Sugar)	2.00	Ingredient - 2	0.75	Product Delay	0.00
Ingredient - 1	1.10	Product Delay	1.00	Whipper Time	3.00
Ingredient - 2	1.50	Whipper Time	0.00	Whipper Delay	0.50
Product Delay	1.00	Whipper Delay	0.00		
Whipper Time	2.50				
Whipper Delay	0.50				

Latte	Preset	Caffe Mocha	Preset	Espresso	Preset
Hot Water (Coffee)	2.50	Hot Water (Choc)	3.25	Hot Water (Coffee)	3.25
Ingredient	1.00	Ingredient	2.75	Ingredient	1.50
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	3.00	Whipper Time	3.75	Whipper Time	3.75
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	3.50	Hot Water (Milk)	1.80	Hot Water (Sugar)	1.75
Topping Ingredient	3.00	Ingredient	0.85	Ingredient - 1	0.50
Product Delay	1.00	Product Delay	1.00	Ingredient - 2	1.00
Whipper Time	4.00	Whipper Time	2.30	Product Delay	1.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Time	2.25
Hot Water (Sugar)	2.00	Hot Water (Sugar)	1.50	Whipper Delay	0.50
Ingredient - 1	1.00	Ingredient	1.00		
Ingredient - 2	1.50	Product Delay	1.00		
Product Delay	1.00	Whipper Time	2.00		
Whipper Time	2.50	Whipper Delay	0.50		
Whipper Delay	0.50				

Chocomilk	Preset	Chocolate	Preset	Soup	Preset
Hot Water (Choc)	4.25	Hot Water	7.50	Hot Water	7.50
Ingredient	2.75	Ingredient	2.75	Ingredient	1.50
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	4.75	Whipper Time	8.00	Whipper Time	8.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	2.75				
Ingredient	0.85				
Product Delay	1.00				
Whipper Time	3.25				
Whipper Delay	0.50				

Hot Milk	Preset	Hot Water	Preset
Hot Water	7.50	Water	8.00
Ingredient	1.50		
Product Delay	1.00		
Whipper Time	8.00		
Whipper Delay	0.50		

## 9.3 Freshbrew - Option 1

Speciality drinks made with freshbrew coffee.

F/B Coffee	Preset	F/B Tea	Preset	F/B Cappuccino	Preset
Hot Water (Coffee)	4.00	Hot Water (Tea)	4.00	Hot Water (Milk)	2.50
Ingredient - 1	2.50	Ingredient - 1	1.50	Ingredient	1.50
Ingredient - 2	3.50	Ingredient - 2	2.00	Product Delay	1.00
Ingredient - 3	1.90	Ingredient - 3	0.90	Whipper Time	3.00
Product Delay	1.00	Product Delay	1.00	Whipper Delay	0.50
Brewer Delay - 1	0.00	Hot Water (Milk)	2.00	Hot Water (Sugar)	1.25
Brewer Delay - 2	0.00	Ingredient - 1	0.25	Ingredient - 1	0.50
Brewer Delay - 3	0.00	Ingredient - 2	0.50	Ingredient - 2	0.75
Brewer Delay - 4	0.00	Product Delay	1.00	Product Delay	1.00
Hot Water (Milk)	2.00	Whipper Time	0.00	Whipper Time	1.75
Ingredient - 1	0.75	Whipper Delay	0.00	Whipper Delay	0.50
Ingredient - 2	1.00	Hot Water (Sugar)	2.00	Hot Water (Coffee)	3.75
Product Delay	1.00	Ingredient - 1	0.50	Ingredient	2.00
Whipper Time	0.00	Ingredient - 2	1.00	Product Delay	1.00
Whipper Delay	0.00	Product Delay	1.00	Brewer Delay - 1	0.00
Hot Water (Sugar)	2.00	Whipper Time	0.00	Brewer Delay - 2	0.00
Ingredient - 1	0.50	Whipper Delay	0.00	Brewer Delay - 3	0.00
Ingredient - 2	1.00			Brewer Delay - 4	0.00
Product Delay	1.00				
Whipper Time	0.00				
Whipper Delay	0.00				
F/B Latte	Preset	F/B Mocha	Preset	F/B Espresso	Preset
Hot Water (Coffee)	2.50	Hot Water (Choc)	3.25	Hot Water (Coffee)	3.25
F/B Coffee Ing.	1.50	Ingredient	2.75	Ingredient	2.50
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Brewer Delay - 1	0.00	Whipper Time	3.75	Brewer Delay - 1	0.00
Brewer Delay - 2	0.00	Whipper Delay	0.50	Brewer Delay - 2	0.00
Brewer Delay - 3	0.00	Hot Water (Milk)	1.80	Brewer Delay - 3	0.00
Brewer Delay - 4	0.00	Ingredient	0.85	Brewer Delay - 4	0.00
Hot Water (Milk)	3.50	Product Delay	1.00	Hot Water (Sugar)	1.75
Ingredient	2.00	Whipper Time	2.30	Ingredient - 1	0.50
Product Delay	1.00	Whipper Delay	0.50	Ingredient - 2	1.00
Whipper Time	4.00	Hot Water (Coffee)	1.50	Product Delay	1.00
Whipper Delay	0.50	Ingredient	1.00	Whipper Time	2.25
Hot Water (Sugar)	2.00	Product Delay	1.00	Whipper Delay	0.50
Ingredient - 1	1.00	Brewer Delay - 1	0.00		
Ingredient - 2	1.50	Brewer Delay - 2	0.00		
Product Delay	1.00	Brewer Delay - 3	0.00		
Whipper Time	2.50	Brewer Delay - 4	0.00		
Whipper Delay	0.50				

Chocomilk	Preset	Chocolate	Preset	Hot Milk	Preset
Hot Water (Choc)	4.25	Hot Water	7.50	Hot Water	7.50
Ingredient	2.75	Ingredient	2.75	Ingredient	1.50
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	4.75	Whipper Time	8.00	Whipper Time	8.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	2.75				
Ingredient	0.85				
Product Delay	1.00				
Whipper Time	3.25				
Whipper Delay	0.50				
				Hot Milk	Preset
				Water	7.50

## 9.4 Freshbrew - Option 2

Speciality selections made with instant coffee.

F/B Coffee	Preset	F/B Tea	Preset	F/B Cappucino	Preset
Hot Water (Coffee)	4.00	Hot Water (Tea)	4.00	Hot Water (Milk)	2.50
Ingredient - 1	2.50	Ingredient - 1	1.50	Ingredient	1.50
Ingredient - 2	3.50	Ingredient - 2	2.00	Product Delay	1.00
Ingredient - 3	1.90	Ingredient - 3	0.90	Whipper Time	3.00
Product Delay	1.00	Product Delay	1.00	Whipper Delay	0.50
Brewer Delay - 1	0.00	Hot Water (Milk)	2.00	Hot Water (Sugar)	1.25
Brewer Delay - 2	0.00	Ingredient - 1	0.25	Ingredient - 1	0.50
Brewer Delay - 3	0.00	Ingredient - 2	0.50	Ingredient - 2	0.75
Brewer Delay - 4	0.00	Product Delay	1.00	Product Delay	1.00
Hot Water (Milk)	2.00	Whipper Time	0.00	Whipper Time	1.75
Ingredient - 1	0.75	Whipper Delay	0.00	Whipper Delay	0.50
Ingredient - 2	1.10	Hot Water (Sugar)	2.00	Hot Water (Coffee)	4.00
Product Delay	1.00	Ingredient - 1	0.50	Ingredient	0.75
Whipper Time	0.00	Ingredient - 2	1.00	Product Delay	1.00
Whipper Delay	0.00	Product Delay	1.00	Whipper Time	4.50
Hot Water (Sugar)	2.00	Whipper Time	0.00	Whipper Delay	0.50
Ingredient - 1	0.50	Whipper Delay	0.00	Hot Water (Choc)	1.75
Ingredient - 2	1.00			Ingredient	1.00
Product Delay	1.00			Product Delay	1.00
Whipper Time	0.00			Whipper Time	2.25
Whipper Delay	0.00			Whipper Delay	0.50

Instant Coffee	Preset	Latte	Preset	Caffe Mocha	Preset
Hot Water (Coffee)	4.00	Hot Water (Coffee)	1.50l	Hot Water (Choc)	4
Ingredient - 1	0.70	Ingredient	1.00	Ingredient	2.75
Ingredient - 2	1.05	Product Delay	1.00	Product Delay	1
Ingredient - 3	0.53	Whipper Time	2.00	Whipper Time	4.5
Product Delay	1.00	Whipper Delay	0.50	Whipper Delay	0.5
Whipper Time	4.50	Hot Water (Milk)	4.50	Hot Water (Milk)	2
Whipper Delay	0.50	Ingredient	3.50	Ingredient	1.5
Hot Water (Milk)	2.00	Product Delay	1.00	Product Delay	1
Ingredient - 1	0.75	Whipper Time	5.00	Whipper Time	2.5
Ingredient - 2	1.10	Whipper Delay	0.50	Whipper Delay	0.5
Product Delay	1.00	Hot Water (Sugar)	2.00	Hot Water (Coffee)	2
Whipper Time	2.50	Ingredient - 1	1.00	Ingredient	1
Whipper Delay	0.50	Ingredient - 2	1.50	Product Delay	1
Hot Water (Sugar)	2.00	Product Delay	1.00	Whipper Time	2.5
Ingredient - 1	1.10	Whipper Time	2.50	Whipper Delay	0.5
Ingredient - 2	1.50	Whipper Delay	0.50		
Product Delay	1.00				
Whipper Time	2.50				
Whipper Delay	0.50				

Chocomilk	Preset	Espresso	Preset	Chocolate	Preset
Hot Water (Choc)	4.25	Hot Water (Coffee)	4.00	Hot Water	7.50
Ingredient	2.75	Ingredient	1.00	Ingredient	2.75
Product Delay	1.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	4.75	Whipper Time	4.50	Whipper Time	8.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Delay	0.50
Hot Water (Milk)	2.75	Hot Water (Sugar)	1.25		
Ingredient	1.50	Ingredient - 1	0.50		
Product Delay	1.00	Ingredient - 2	1.00		
Whipper Time	3.25	Product Delay	1.00		
Whipper Delay	0.50	Whipper Time	1.75		
		Whipper Delay	0.50		
				Hot Water	Preset
				Water	8.00

## 9.5 B2C

F/B Coffee	Preset	Fresh Coffee	Preset	Cappuccino	Preset
Hot Water (Coffee)	80ml	Hot Water (Coffee)	80ml	Hot Water (Capp)	80ml
Ingredient - 1	2.75	Ingredient - 1	6.0g	Ingredient	2.00
Ingredient - 2	3.00	Ingredient - 2	7.0g	Product Delay	1.00
Ingredient - 3	2.50	Ingredient - 3	5.0g	Whipper Time	5.50
Product Delay	0.00	Product Delay	0.00	Whipper Delay	1.00
Hot Water (Milk)	40ml	Hot Water (Milk)	40ml	Hot Water (Sugar)	30ml
Ingredient - 1	1.25	Ingredient - 1	1.10	Ingredient - 1	1.00
Ingredient - 2	1.50	Ingredient - 2	1.50	Ingredient - 2	1.50
Product Delay	0.00	Product Delay	1.00	Product Delay	1.00
Whipper Time	0.00	Whipper Time	0.00	Whipper Time	3.50
Whipper Delay	0.00	Whipper Delay	0.00	Whipper Delay	0.50
Hot Water (Sugar)	40ml	Hot Water (Sugar)	40ml	Hot Water (Coffee)	50ml
Ingredient - 1	0.50	Ingredient - 1	0.50	Ingredient	7.5g
Ingredient - 2	1.00	Ingredient - 2	1.00	Product Delay	0.00
Product Delay	1.00	Product Delay	1.00	End of Vend Delay	0.00
Whipper Time	0.00	Whipper Time	0.00		
Whipper Delay	0.00	Whipper Delay	0.00		
End of Vend Delay	0.00	End of Vend Delay	0.00		

Caffe Mocha	Preset	Caffe Latte	Preset	Americano	Preset
Hot Water (Choc)	65ml	Hot Water (Coffee)	50ml	Hot Water (Coffee)	80ml
Ingredient	2.75	Ingredient	7.5g	Ingredient	7.5g
Product Delay	1.00	Product Delay	0.00	Product Delay	0.00
Whipper Time	4.50	Hot Water (capp)	85ml	Hot Water (Sugar)	30ml
Whipper Delay	0.50	Ingredient	3.00	Ingredient - 1	1.00
Hot Water (Capp)	45ml	Product Delay	1.00	Ingredient - 2	1.50
Ingredient	1.70	Whipper Time	5.50	Product Delay	1.00
Product Delay	1.00	Whipper Delay	1.00	Whipper Time	2.50
Whipper Time	3.50	Hot Water (Sugar)	30ml	Whipper Delay	0.50
Whipper Delay	1.00	Ingredient - 1	1.00	Hot Water (TopUP)	80ml
Hot Water (Coffee)	50ml	Ingredient - 2	1.50	End of Vend Delay	0.00
Ingredient	7.5g	Product Delay	1.00		
Product Delay	0.00	Whipper Time	2.50		
End of Vend Delay	0.00	Whipper Delay	0.50		
		End of Vend Delay	0.00		

Espresso	Preset	Dble Espresso	Preset	Chocomilk	Preset
Hot Water (Coffee)	30ml	Hot Water (Coffee)	80ml	Hot Water (Choc)	80ml
Ingredient	7.50	Ingredient	9.0g	Ingredient	2.5g
Product Delay	0.00	Product Delay	0.00	Product Delay	0.50
Hot Water (Sugar)	20ml	Hot Water (Sugar)	20ml	Whipper Time	5.50
Ingredient - 1	0.50	Ingredient - 1	0.50	Whipper Delay	0.50
Ingredient - 2	1.00	Ingredient - 2	1.00	Hot Water (Milk)	70ml
Product Delay	1.00	Product Delay	1.00	Ingredient	0.85
Whipper Time	2.50	Whipper Time	2.50	Product Delay	1.00
Whipper Delay	0.50	Whipper Delay	0.50	Whipper Time	5.00
End of Vend Delay	0.00	End of Vend Delay	0.00	Whipper Delay	1.00
				End of Vend Delay	0.00

Chocolate	Preset	Hot Water	Preset
Hot Water	160ml	Water	160ml
Ingredient	2.50	End of Vend Delay	0.00
Product Delay	1.00		
Whipper Time	8.00		
Whipper Delay	0.50		
End of Vend Delay	0.00		

## 9.6 Grammes/Second Information

All the ingredient pre-sets shown in the previous tables are shown as seconds except where indicated. The table below shows the approximate gramme throw dispensed per product per second.

Product	Grammes/Second
Milk	5g
Sugar	7g
Chocolate	7g
Chocomilk	4.5g
Coffee	1.7g
Decaff Coffee	1.8g
Freshbrew Coffee	4g
Instant Tea	0.7g
Freshbrew Tea	3.6g

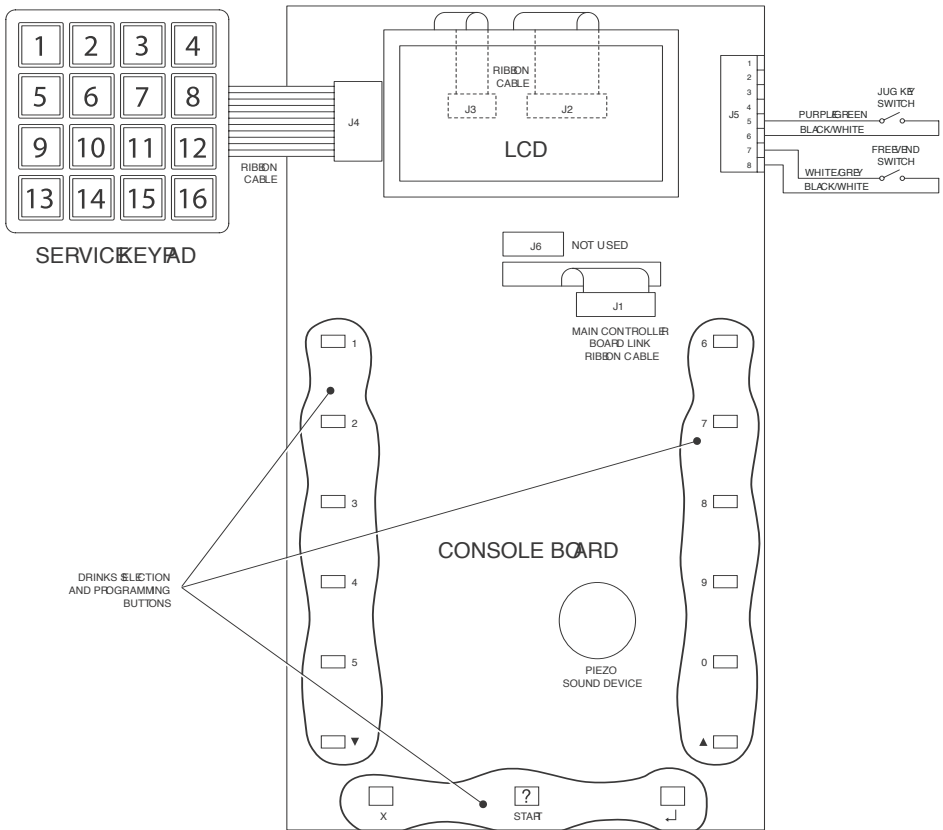


## Section 10 - Electrical/Electronic Diagrams

The diagrams shown on the following pages illustrate the layout of, and the connections between, the electrical and electronic components within Genesis machines.

**N.B.** Instant, Freshbrew and Espresso machines are equipped with very similar wiring arrangements. The following diagrams are common to all machines except where stated.

### 10.1 Console Board/Service Keypad

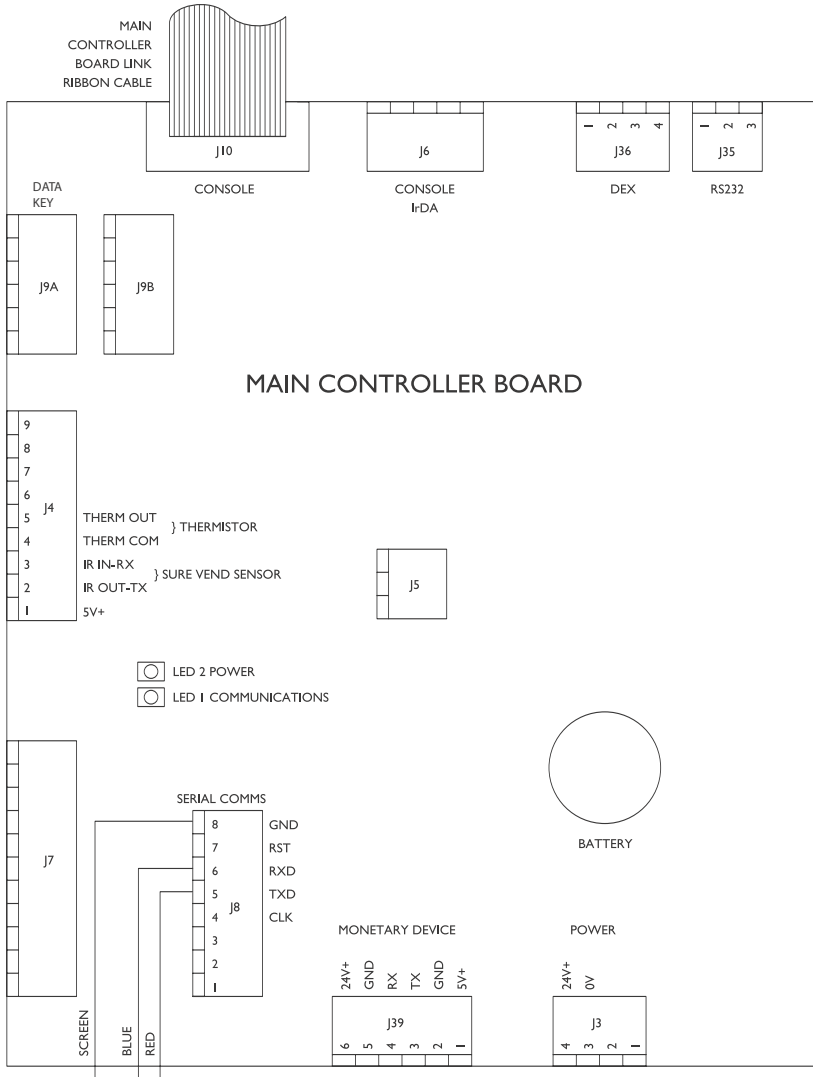


**N.B.** The Jug Switch and Free Vend Switch will only work with software versions 1.03 and above.

## 10.2 Control Board

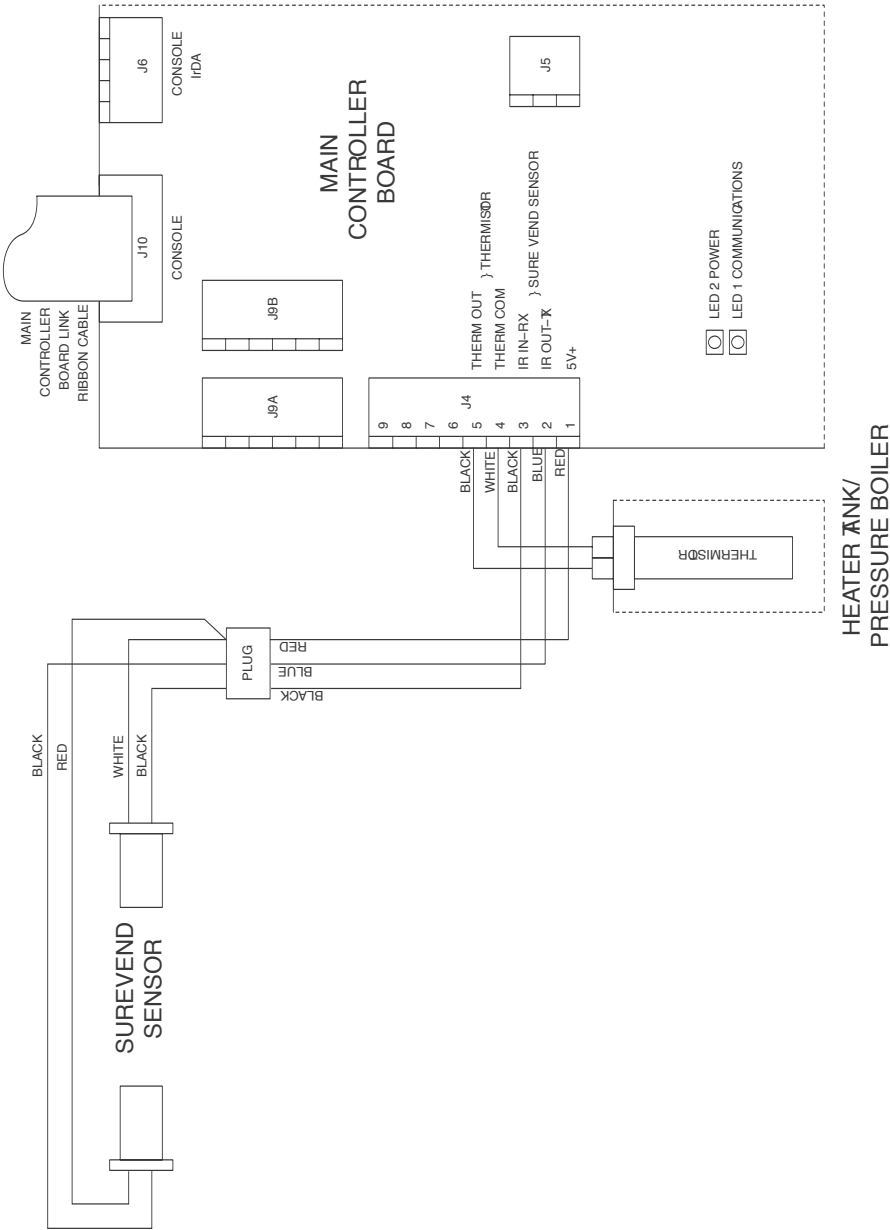
The Control Board is the main controller for all of the machines functions. The board is located inside the door behind the monetary cover. To gain access to the board:

1. Switch off the power to the machine and open the front door. Unscrew and remove the two knurled thumbscrews securing the monetary cover.
2. Open the monetary cover. Loosen the four screws securing the control board cover and remove.



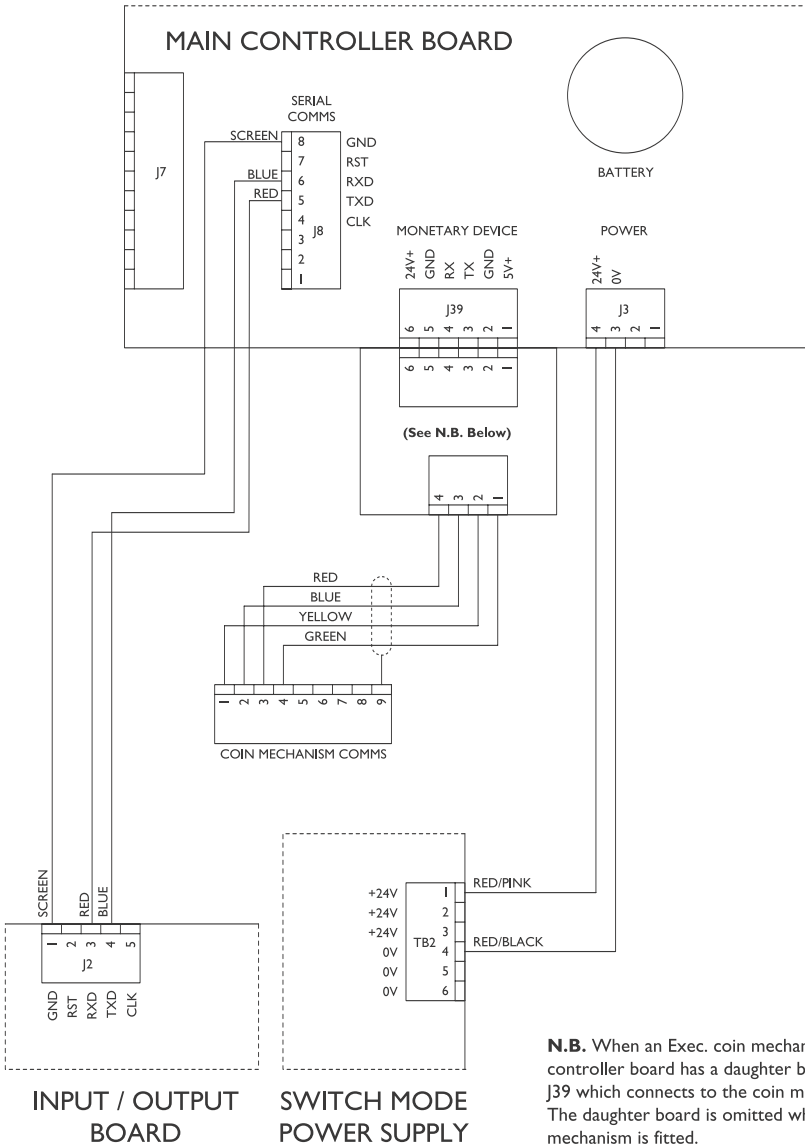
### 10.3 Control Board Connections - 1

The diagram below illustrates the connections between the control board and the console board, SureVend™ sensor and heater tank (Instant & Freshbrew machines)/pressure boiler (B2C machines) thermistor.



## 10.4 Control Board Connections - 2

The diagram below illustrates the connections between the control board and the input/output board, coin mechanism communications and the switch mode power supply.



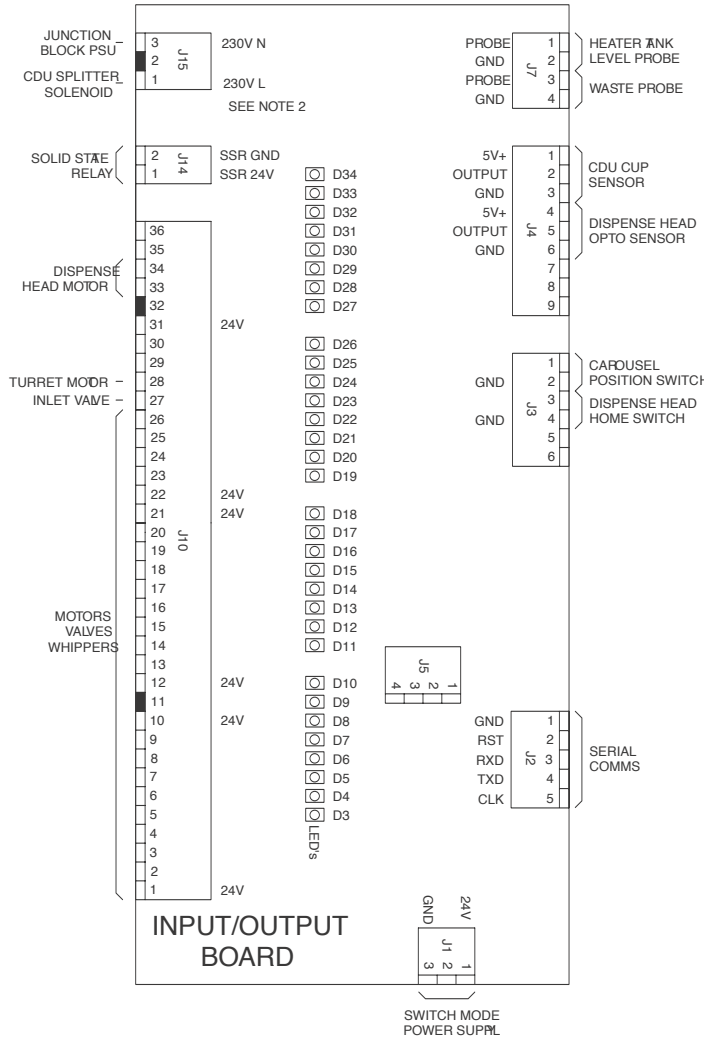
**N.B.** When an Exec. coin mechanism is fitted, the controller board has a daughter board attached at J39 which connects to the coin mechanism comms. The daughter board is omitted when an MDB mechanism is fitted.

## 10.5 Input/Output Board (Instant Machines)

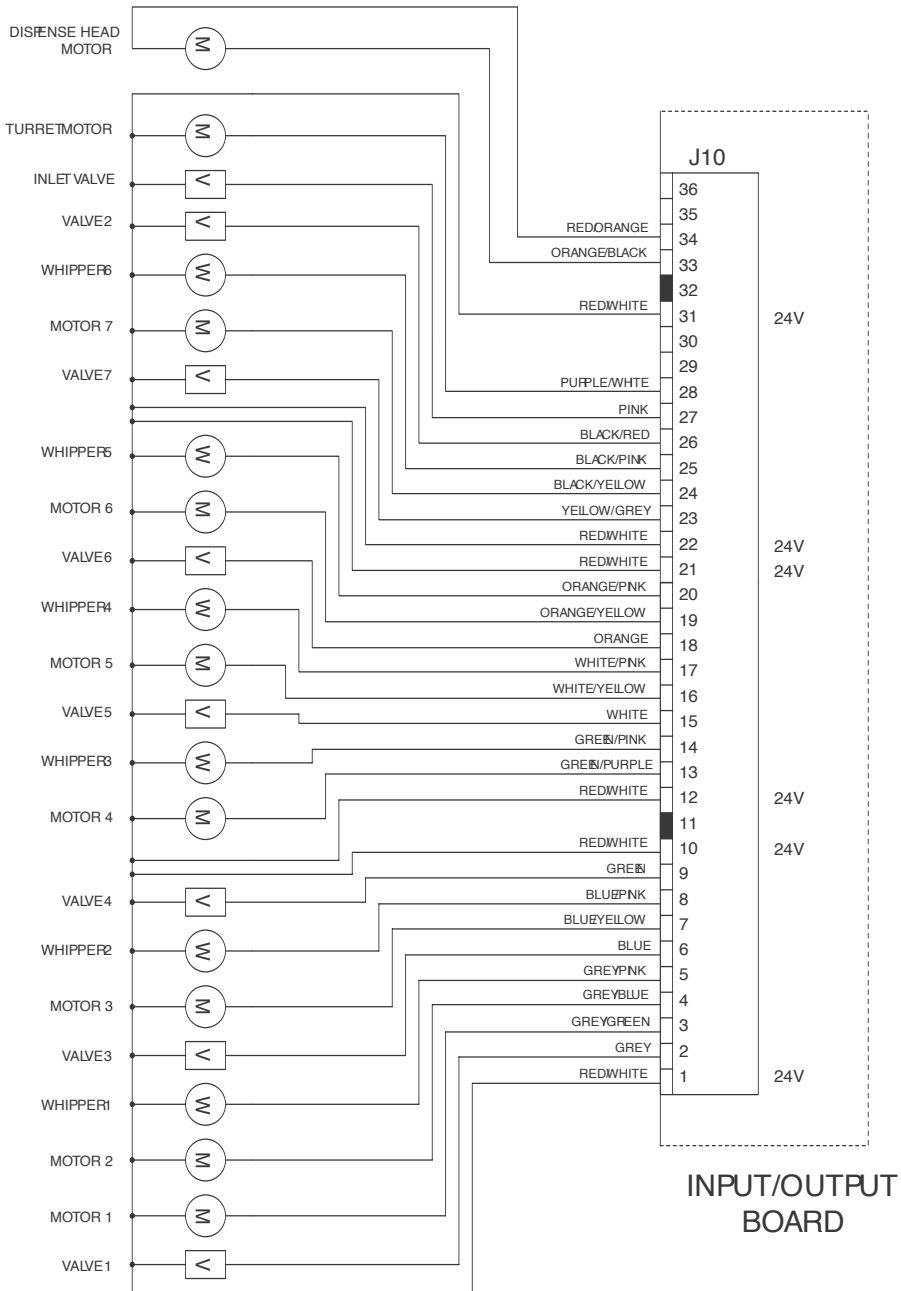
The Input/Output Board is mounted onto the power supply chassis. This is located on the PSU chassis on the left hand side of the machine and can be accessed by removing the lower front panel.

### I/O BOARD LED REFERENCE

- D3 = VALVE 1
- D4 = MOTOR 1
- D5 = MOTOR 2
- D6 = WHIPPER 1
- D7 = VALVE 3
- D8 = MOTOR 3
- D9 = WHIPPER 2
- D10 = VALVE 4
- D11 = MOTOR 4
- D12 = WHIPPER 3
- D13 = VALVE 5
- D14 = MOTOR 5
- D15 = WHIPPER 4
- D16 = VALVE 6
- D17 = MOTOR 7
- D18 = WHIPPER 5
- D19 = VALVE 7
- D20 = MOTOR 8
- D21 = WHIPPER 6
- D22 = VALVE 2
- D23 = INLET VALVE
- D24 = TURRET MOTOR
- D25 =
- D26 =
- D27 = DISP HEAD MOTOR OUT
- D28 = DISP HEAD MOTOR IN
- D29 = DISP HEAD MOTOR ON
- D30 =
- D31 =
- D32 =
- D33 = HEATER
- D34 = CDU SOLENOID



## 10.6 Output Circuit (Instant Machines)

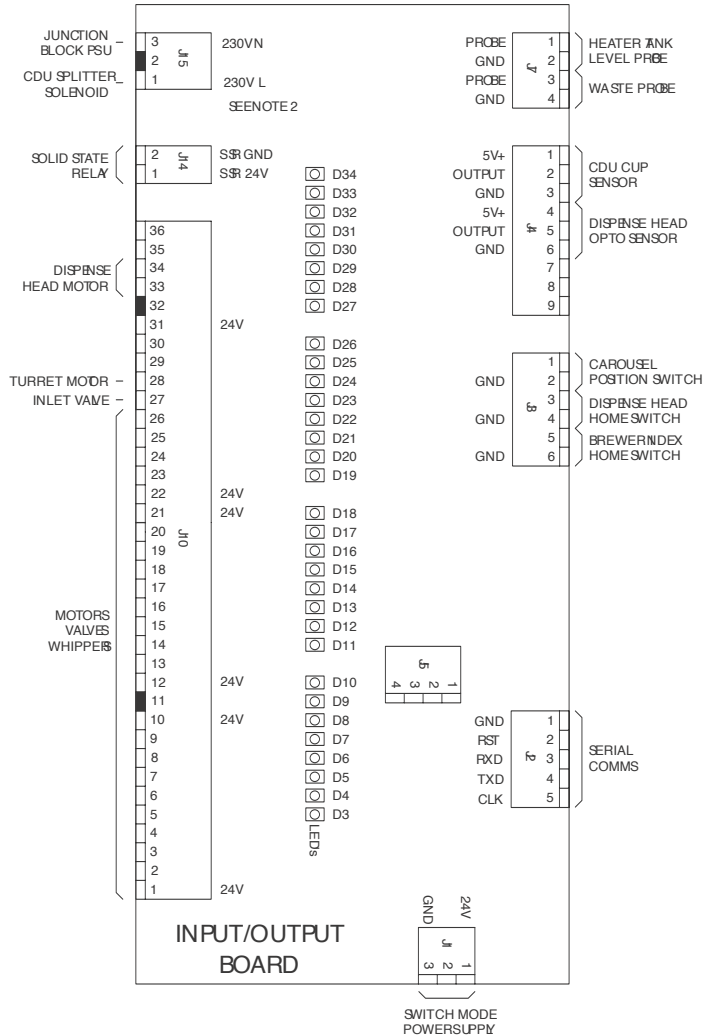


## 10.7 Input/Output Board (Freshbrew Machines)

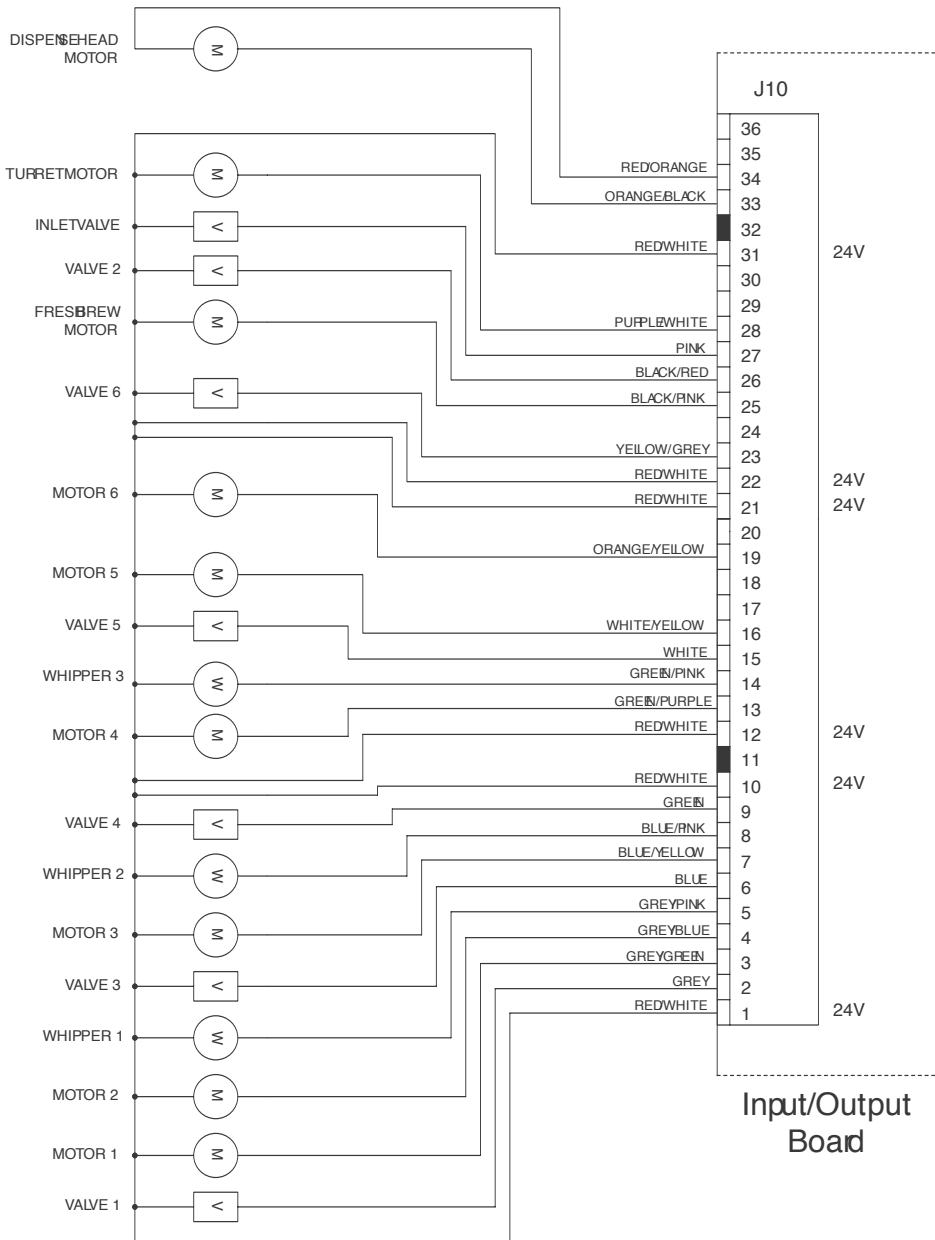
The Input/Output Board is mounted onto the power supply chassis. This is located on the PSU chassis on the left hand side of the machine and can be accessed by removing the lower front panel.

### I/O Board LED Reference

- D3 = VALVE 1
- D4 = MOTOR 1
- D5 = MOTOR 2
- D6 = WHIPPER 1
- D7 = VALVE 3
- D8 = MOTOR 3
- D9 = WHIPPER 2
- D10 = VALVE 4
- D11 = MOTOR 4
- D12 = WHIPPER 3
- D13 = VALVE 5
- D14 = MOTOR 5
- D15 =
- D16 =
- D17 = MOTOR 6
- D18 =
- D19 =
- D20 =
- D21 = FRESH BREW MOTOR
- D22 = VALVE 2
- D23 = INLET VALVE
- D24 = TURRET MODR
- D25 =
- D26 =
- D27 = DISP HEAD MODR OUT
- D28 = DISP HEAD MODR IN
- D29 = DISP HEAD MODR ON
- D30 =
- D31 =
- D32 =
- D33 = HEATER
- D34 = CDU SOLENOID



## 10.8 Output Circuit (Freshbrew Machines)





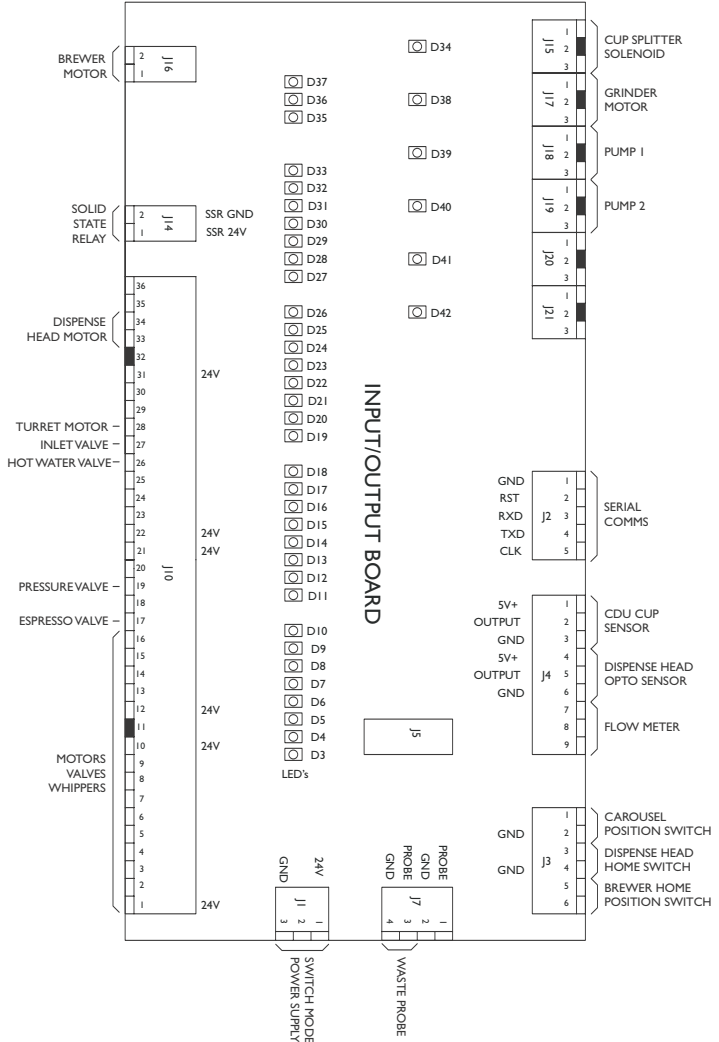
## 10.9 (a) Input/Output Board (B2C Machines)

The Input/Output Board is mounted onto the power supply chassis. This is located on the PSU chassis on the left hand side of the machine and can be accessed by removing the lower front panel.

**N.B.** This board has been superseded, [see page 104](#).

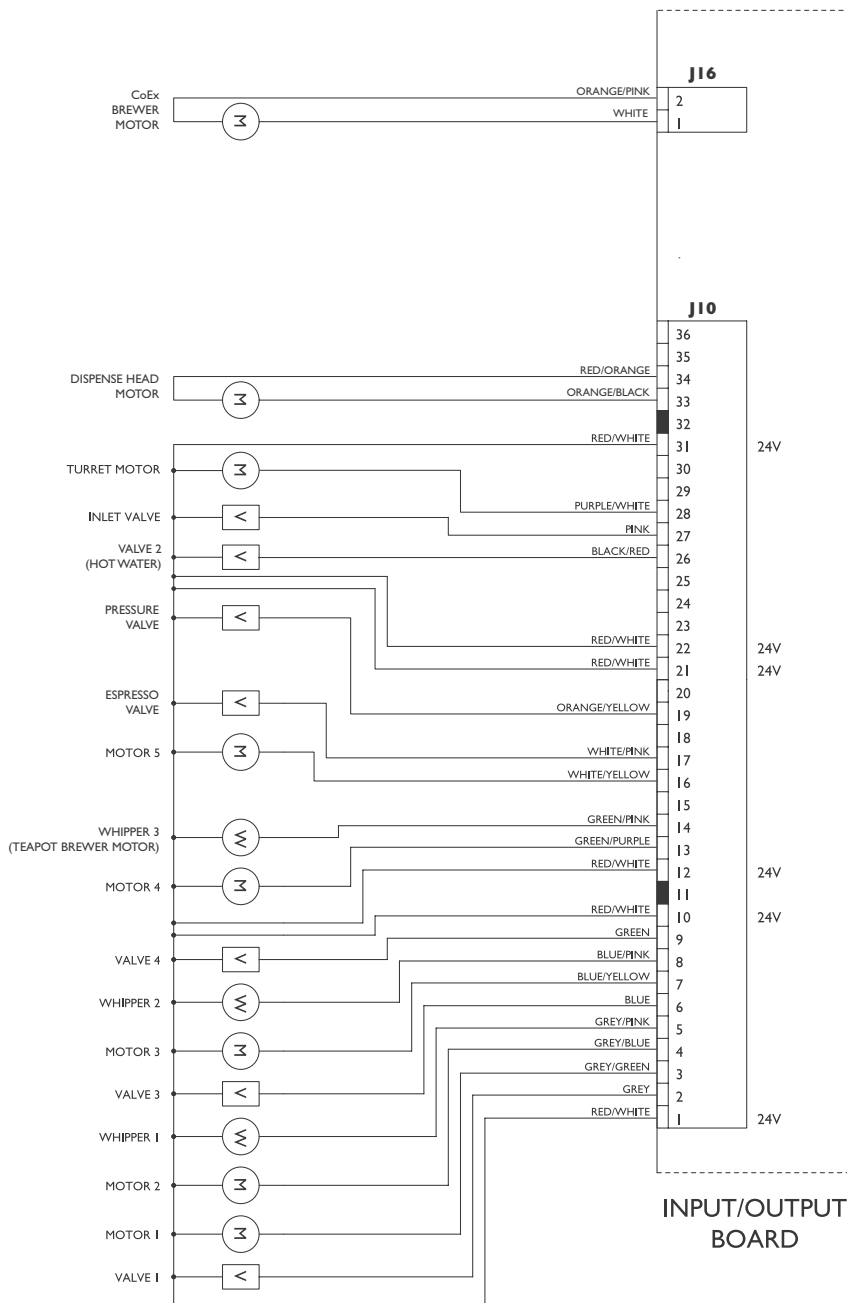
### I/O Board LED Reference

D3 = VALVE 1 (MILK/SUGAR)  
D4 = MOTOR 1 (MILK)  
D5 = MOTOR 2 (SUGAR)  
D6 = WHIPPER 1 (MILK/SUGAR)  
D7 = VALVE 3 (TOPPING)  
D8 = MOTOR 3 (TOPPING)  
D9 = WHIPPER 2 (TOPPING)  
D10 = VALVE 4 (CHOCOLATE)  
D11 = MOTOR 4 (CHOCOLATE)  
D12 = WHIPPER 3 (CHOCOLATE)  
D13 =  
D14 = MOTOR 5 (FIB COFFEE)  
D15 = ESPRESSO VALVE  
D16 =  
D17 = PRESSURE VALVE  
D18 =  
D19 =  
D20 =  
D21 =  
D22 = VALVE 2 (HOT WATER)  
D23 = INLET VALVE  
D24 = TURRET MOTOR  
D25 =  
D26 =  
D27 = DISP HEAD MOTOR OUT  
D28 = DISP HEAD MOTOR IN  
D29 = DISP HEAD MOTOR ON  
D30 =  
D31 =  
D32 =  
D33 = HEATER  
D34 = CDU SOLENOID  
D35 = BREWER ON  
D36 = BREWER (LEFT)  
D37 = BREWER (RIGHT)  
D38 = GRINDER  
D39 = PUMP 1  
D40 = PUMP 2  
D41 =  
D42 =



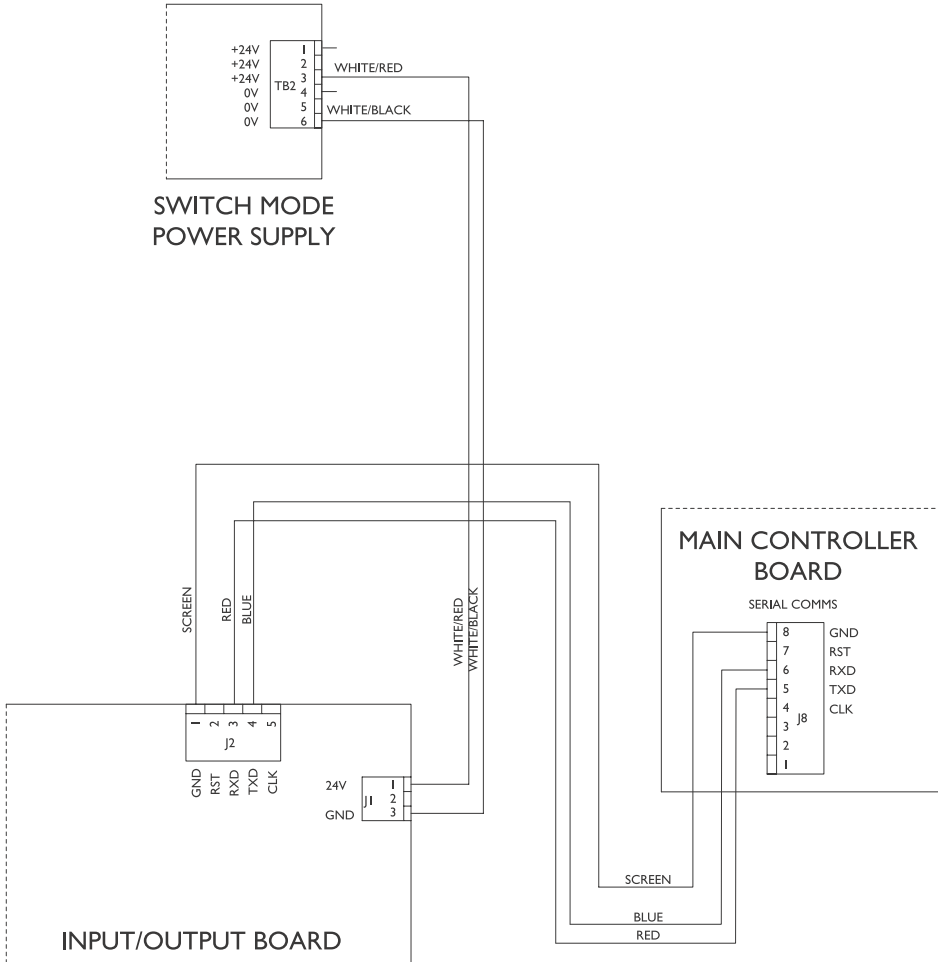


## 10.10 Output Circuit (B2C Machines)



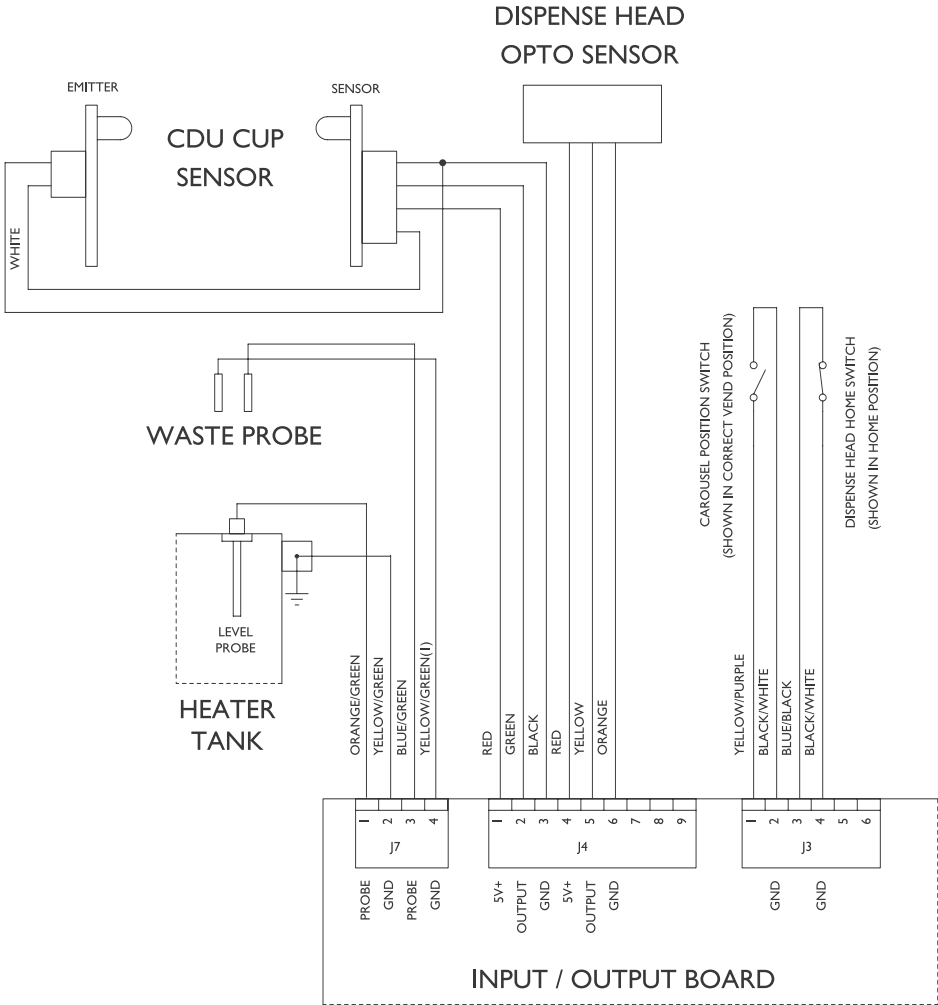
## 10.11 Input/Output Board Connections (Common)

The diagram below illustrates the connections between the I/O board and the main controller board serial comms link and switch mode power supply.



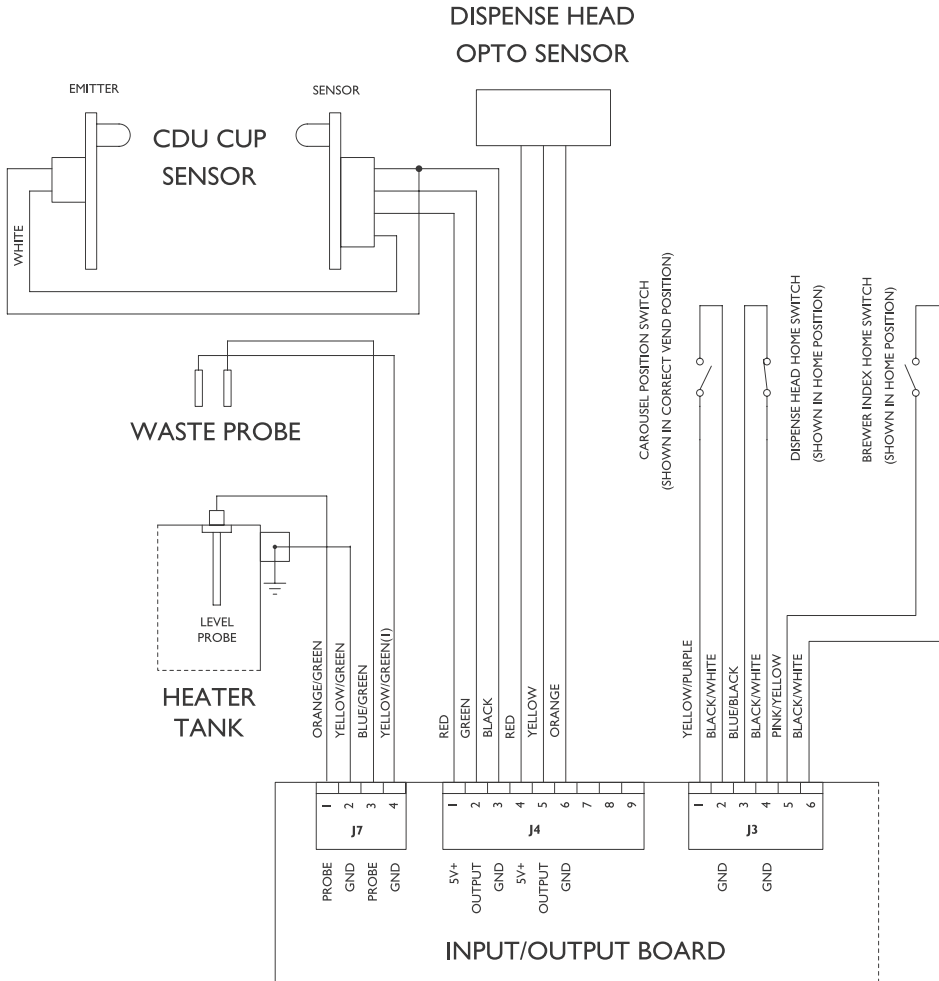
# 10.12 Input/Output Board Connections (Instant Machines)

The diagram below illustrates the connections between the I/O board and the CDU cup sensor, dispense head opto sensor, carousel position switch and dispense head home switch.



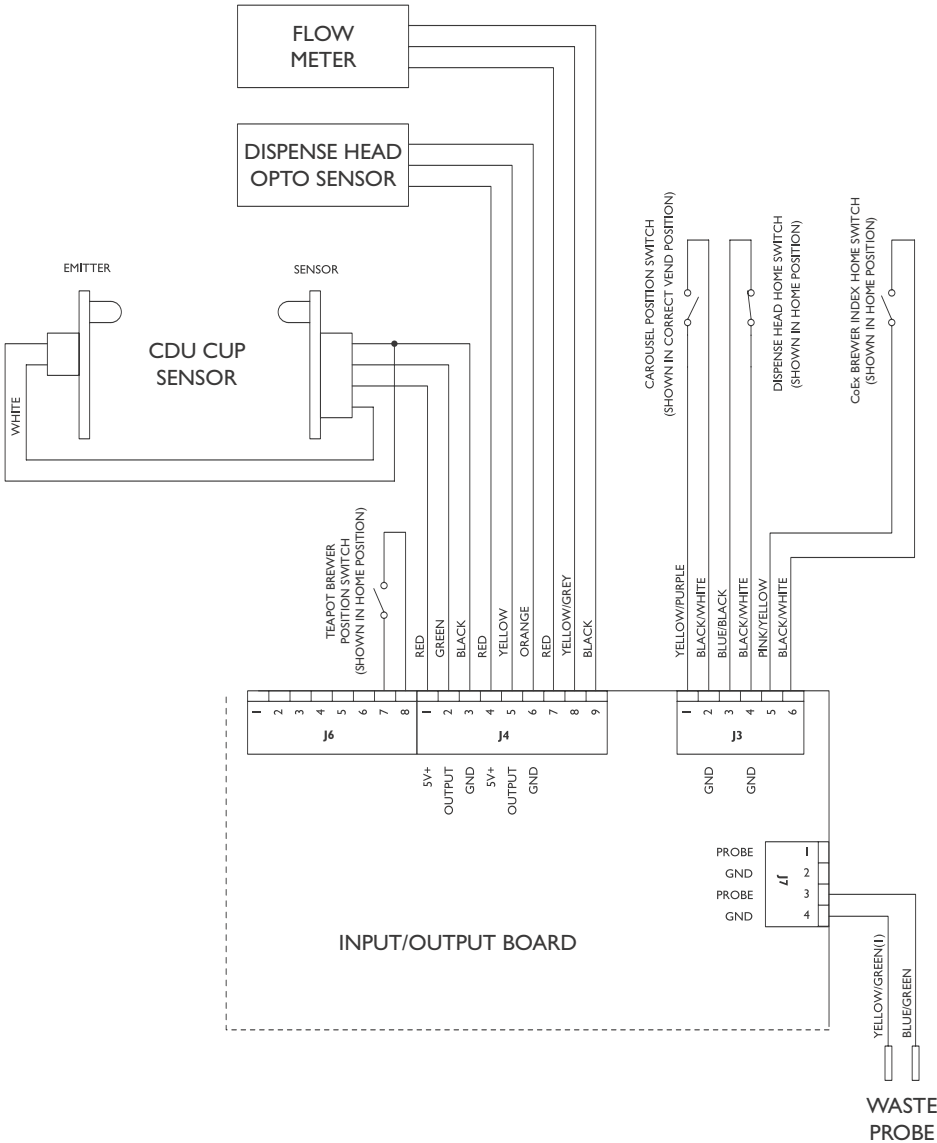
## 10.13 Input/Output Board Connections (Freshbrew Machines)

The diagram below illustrates the connections between the I/O board and the CDU cup sensor, dispense head opto sensor, carousel position switch, dispense head home switch and brewer index home switch.



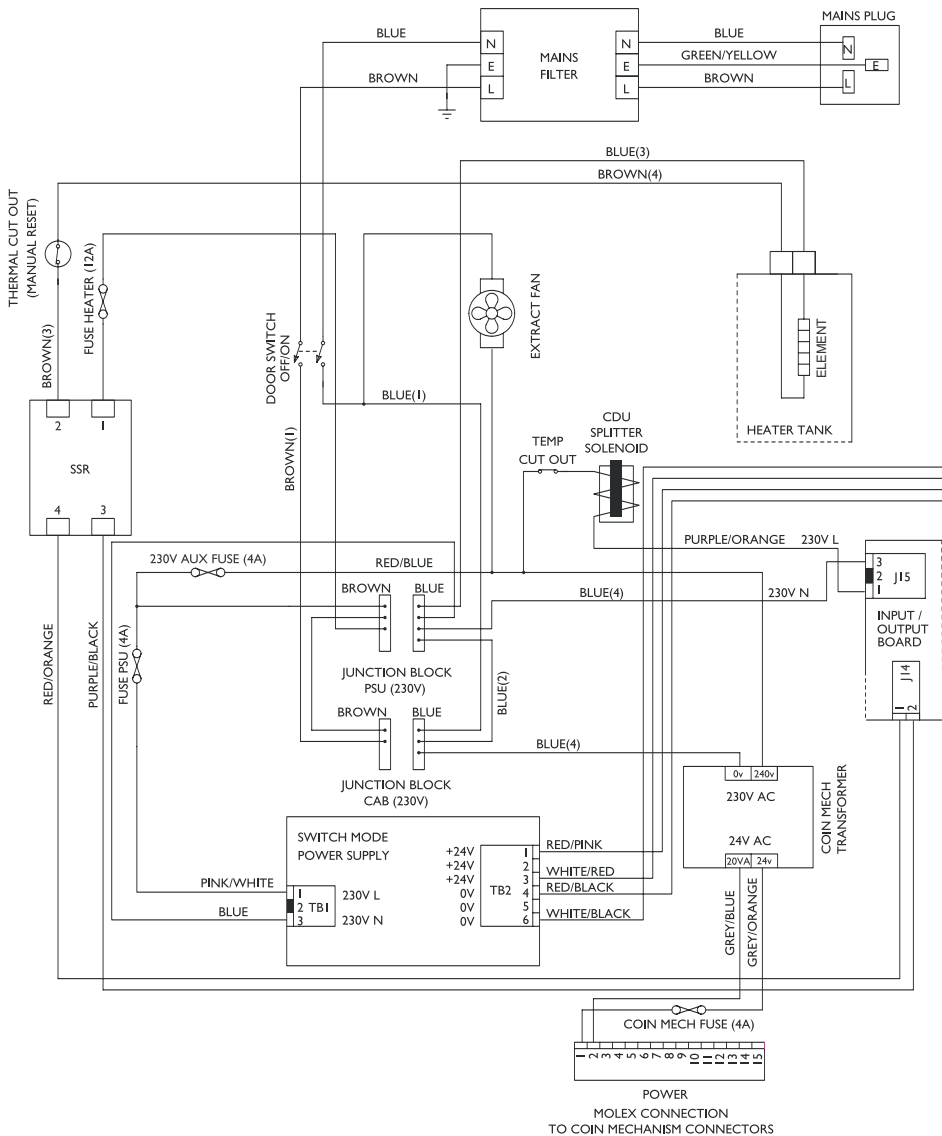
# 10.14 Input/Output Board Connections (B2C Machines)

The diagram below illustrates the connections between the I/O board and the CDU cup sensor, dispense head opto sensor, carousel position switch, dispense head home switch, brewer index home switch and the water flow meter.



## 10.15 (a) Power Circuit - 230V System

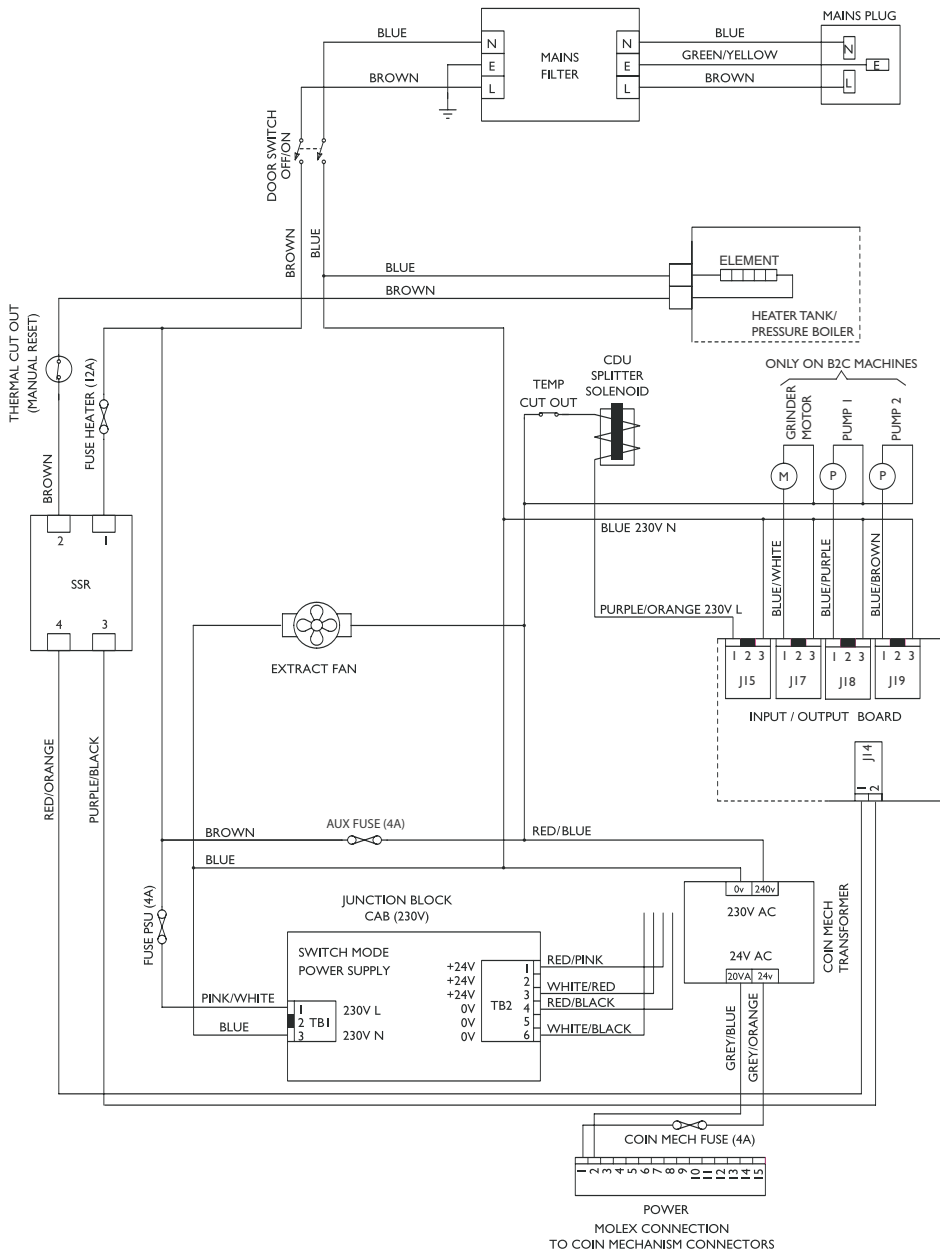
Pre serial numbers up to starting 1634...



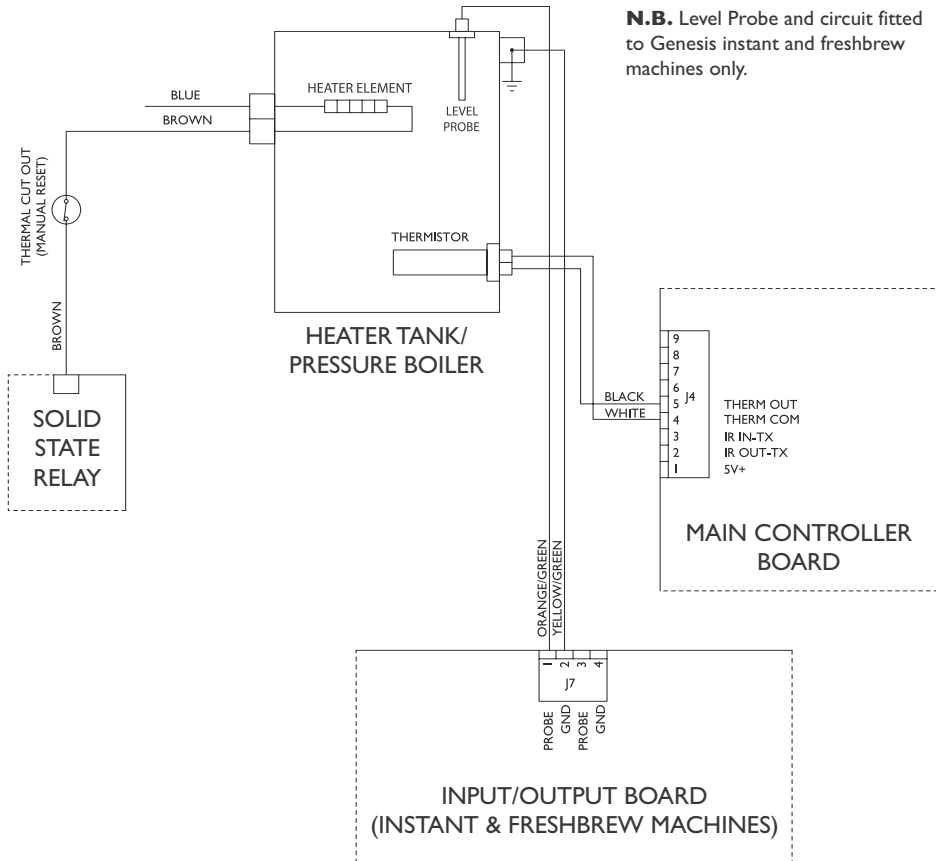


# 10.15 (b) Power Circuit - 230V System

Post serial numbers from starting 1634.....



## 10.16 Heater Circuit



The water temperature in the heater tank (instant/freshbrew machines)/pressure boiler (B2C machines) is controlled by a thermistor probe. The thermistor has a variable resistance; when cold it has a high resistance and when hot it has a low resistance.

1. The thermistor probe sits directly in the water and continuously senses the water temperature. The resistance of the thermistor is interpreted by the controller as a temperature reading.

**N.B.** The resistance of the thermistor when at ambient (room) temperature should read about 3000 ohms, when hot (96°C) it should read approximately 220 ohms.

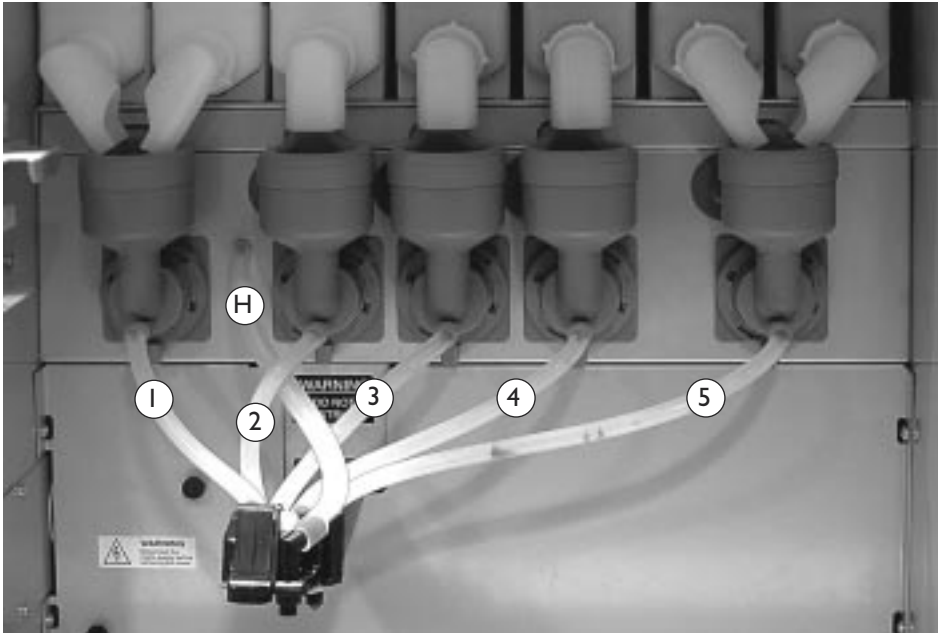
2. If the water needs to be heated, a signal from the controller is sent down the Comms. link to the I/O board (heater on signal). The I/O board then switches a 24 volt negative output to the solid state relay. The solid state relay then switches a 240 volt supply to the heater element. The element then starts to heat up the water.

**N.B.** Heater element fitted to the heater tank of instant/freshbrew machines is rated at 2.4kW. Heating element fitted in the pressure boiler of espresso machines is rated at 2kW.

3. This process continues until the water has reached the temperature which has been set in the temperature configuration program.
4. **Instant & Freshbrew Machines:** If the water in the tank should overheat and boil over, a high temperature cut out, positioned in the overflow pipe, will cut off the mains supply to the heater at approximately 90°C within 60 seconds.
5. When the maximum 'set' temperature has been reached the 'heater on signal' is removed from the Comms. link, switching off the 24 volt negative output from the I/O board and switching off the solid state relay and the heater element.
6. **B2C Machines:** Whenever a drink is selected the water is heated in the pressure boiler throughout the vend.

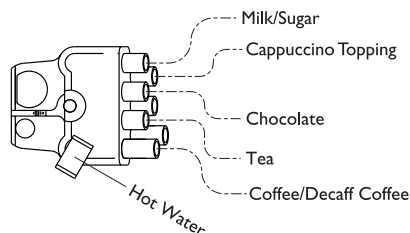
## Section 11 - Dispense Pipe Lengths

### 11.1 Instant - Option 1 Machines

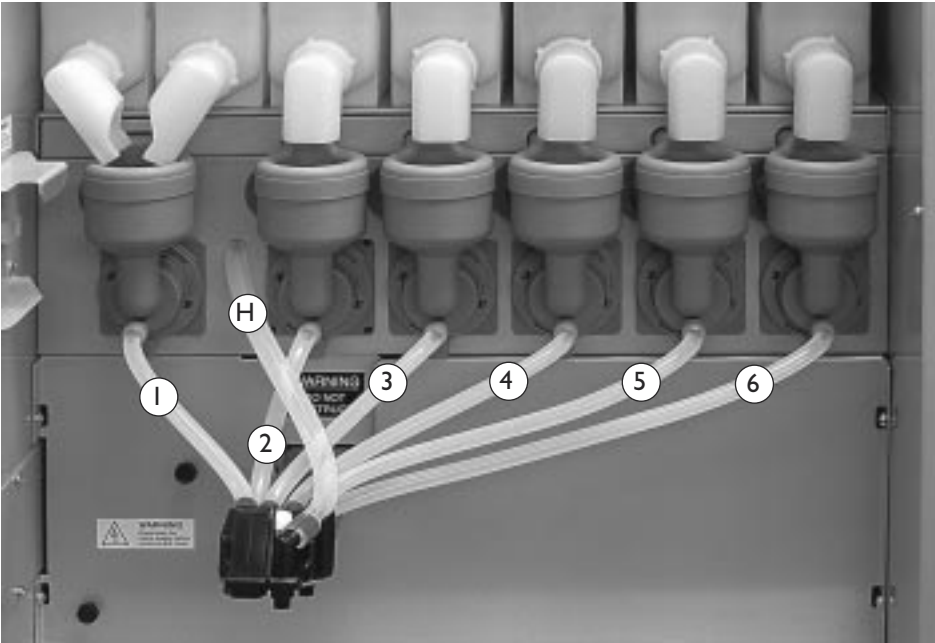


Pipe No	Diameter	Length
1	6 mm I.D. x 10 mm O.D.	170 mm
2	6 mm I.D. x 10 mm O.D.	160 mm
3	6 mm I.D. x 10 mm O.D.	170 mm
4	6 mm I.D. x 10 mm O.D.	210 mm
5	6 mm I.D. x 10 mm O.D.	300 mm

**H** = Hot Water Dispense Pipe

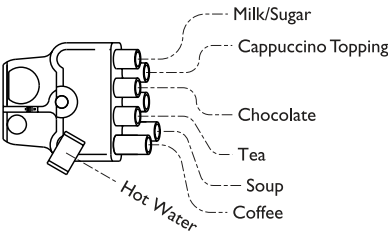


# 11.2 Instant - Option 2 Machines

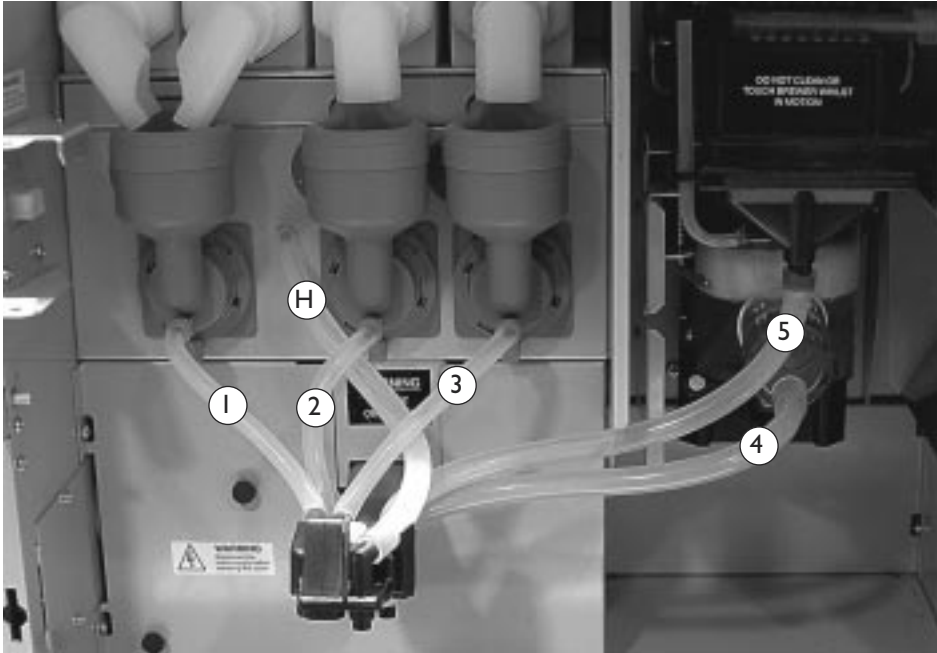


Pipe No	Diameter	Length
1	6 mm I.D. x 10 mm O.D.	170 mm
2	6 mm I.D. x 10 mm O.D.	160 mm
3	6 mm I.D. x 10 mm O.D.	170 mm
4	6 mm I.D. x 10 mm O.D.	210 mm
5	6 mm I.D. x 10 mm O.D.	270 mm
6	6 mm I.D. x 10 mm O.D.	340 mm

**H** = Hot Water Dispense Pipe

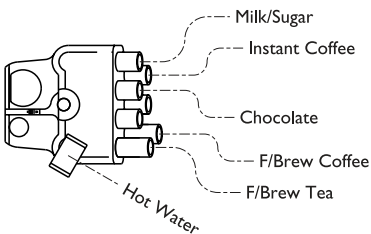


## 11.3 Freshbrew Machines

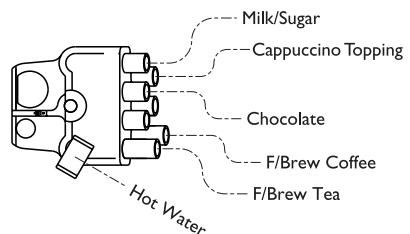


Pipe No	Diameter	Length
1	6 mm I.D. x 10 mm O.D.	170 mm
2	6 mm I.D. x 10 mm O.D.	160 mm
3	6 mm I.D. x 10 mm O.D.	170 mm
4	8 mm I.D. x 13 mm O.D.	250 mm
5	8 mm I.D. x 13 mm O.D.	280 mm

**H** = Hot Water Dispense Pipe

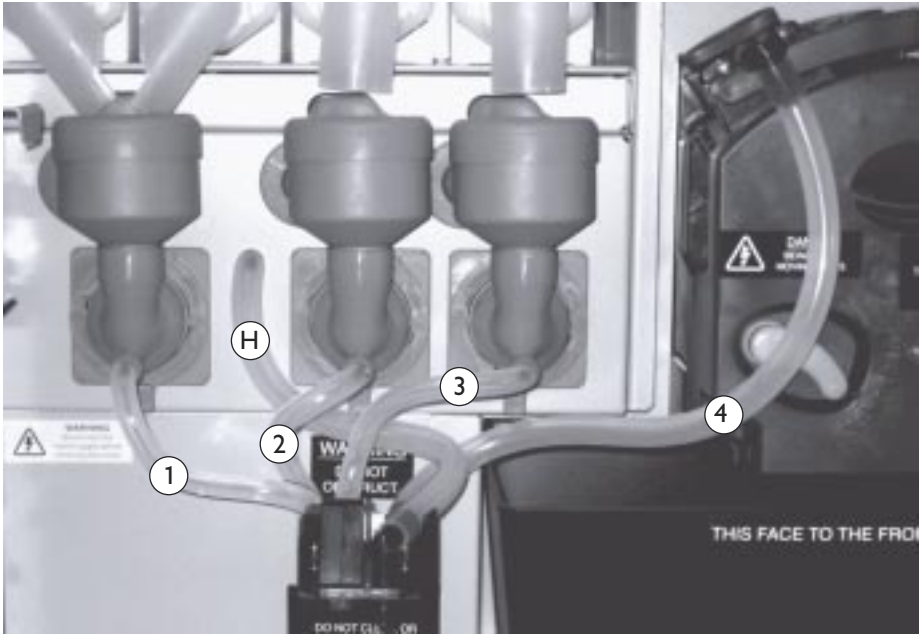


Freshbrew - Option 1



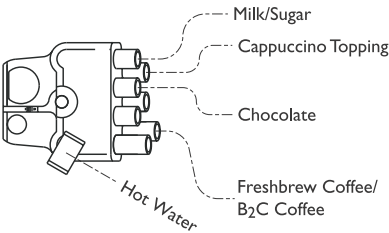
Freshbrew - Option 2

# 11.4 B2C Machines

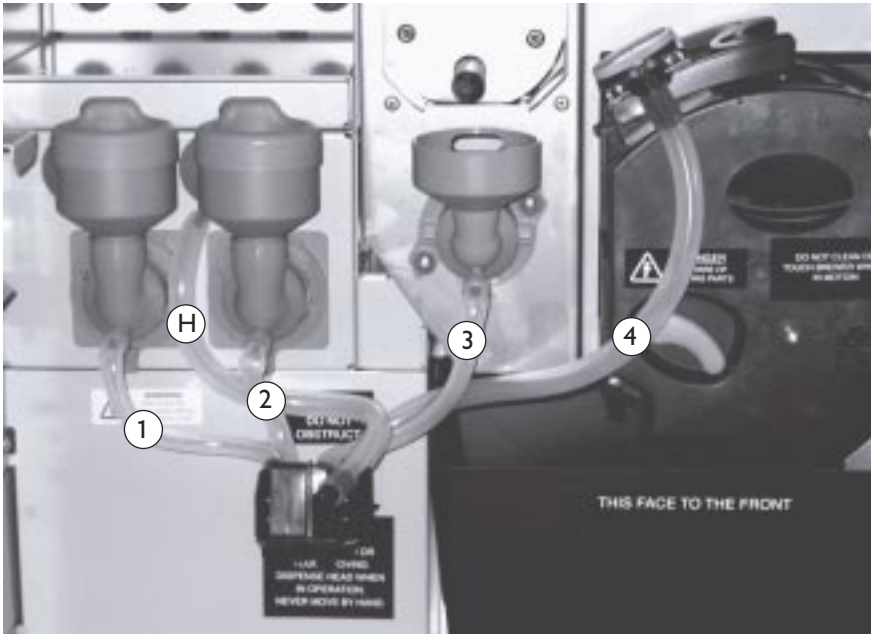


Pipe No	Diameter	Length
1	6 mm I.D. x 10 mm O.D.	170 mm
2	6 mm I.D. x 10 mm O.D.	160 mm
3	6 mm I.D. x 10 mm O.D.	170 mm
4	8 mm I.D. x 13 mm O.D.	360 mm

**H** = Hot Water Dispense Pipe

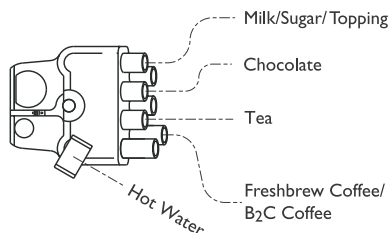


## 11.5 B2C & Teapot Machines



Pipe No	Diameter	Length
1	6 mm I.D. x 10 mm O.D.	170 mm
2	6 mm I.D. x 10 mm O.D.	160 mm
3	6 mm I.D. x 10 mm O.D.	190 mm
4	8 mm I.D. x 13 mm O.D.	360 mm

**H** = Hot Water Dispense Pipe





## Section 12 - Diagnostics and Maintenance Procedures

### 12.1 Diagnostics

The following pages list the error messages that may be displayed, diagnostics messages accessed via the engineers program and fault descriptions. For further help and advice please contact the Crane Merchandising Systems Technical Support Helpline on 01249 667323.

Error Message	Diagnostics Screen Text	Fault Description
Sorry Out of Service Head Not Homed	Head not homed	Dispense head has not returned to home position in expected time
Sorry Out of Service Head not extended	Head Not Extended	Dispense head has not fully extended in the expected time
Sorry Out of Service Waste Tray full	Waste tray full	Waste tray Full
Temporarily Out of Service	Init failed restart	Machine failed on initialisation
Sorry Out of Service No IO Comm	No IO comm	Comms error detected between mpu and I/O board
Initialising	-	CoEx® brewer not situated correctly in the machine
Temporarily Out Of Service	All selections disabled	All drink selections have been disabled
Sorry Out of Service Rinsing	Rinsing	Automatic or manual rinse cycle in progress
-	Rinsing	A rinsing cycle was interrupted and not completed
Out Of Cups Please Insert Mug	Cup turret/no cups/ no cups	Unable to find cup stack. Cup turret has timed-out on initialisation
Sorry Out of Service No Cups	No cups and mug sensor failure	Machine is out of cups and mug sensor is faulty
Out Of Cups Please Insert Mug	No cups/no cups	No cups are available but the mug sensor is working
Temporarily Out Of Service	No cup delivered SV on	Non fatal error detected with SureVend cup mechanism
Sorry Out of Service Please Remove Cup	Mug sensor error/ please remove cup	An error has occurred with the SureVend sensor during a vend
Sorry Out of Service Mug Sensor Error	SureVend error and must SureVend	No cups remaining and fault with mug sensor

Error Message	Diagnostics Screen Text	Fault Description
Please Remove Cup	Mug sensor error	Cup not removed from dispense area after vend completed or faulty mug sensor
Sorry Out of Service Please Insert Mug	No cup delivered ring 1 SureVend on/SureVend error and must SureVend	Problem with CDU (cup jam) No more cups being dispensed
Sorry Out of Service Low Water	Low water	Low water level in heater tank
Sorry Out of Service Water Tank Heating	Water tank heating	Water in the heater tank is below the minimum vend temperature
Sorry Out of Service Fill Timeout	Fill timeout/ low water	Machine has been filling for 2 minutes and not reached optimum level
Sorry Out of Service Invalid Temp	Invalid temp	1. Comms error between I/O & MPU 2. Machine has exceeded optimum boiler temp 3. Temperature probe fault
Sorry Out of Service Brewer Jam	Brewer jam	Brewer has not moved from its home position and may be jammed
Sorry Out of Service Brewer Not Homed	Brewer not homed	Brewer has not returned to its home position and may be jammed
Sorry Out of Service Coin Mech Comm	Coin mech comm	Communication error detected between monetary device and machine
Sorry Out of Service No Monetary Device	No monetary device-fatal	Machine is configured for an incorrect monetary device, or the device is not responding
Temporarily Out Of Service	Coin mech ROM	MDB coin mech ROM checksum test failed (fatal error)
Temporarily Out Of Service	Coin mech accept unplugged	MDB coin mech is unplugged or faulty
Temporarily Out Of Service	Coin mech accept jam	Coin jam detected in coin acceptor
Temporarily Out Of Service	Coin mech payout jam	Coin jam detected in coin tube
Temporarily Out Of Service	Coin mech tube sensor	Coin tube sensor fault detected
Temporarily Out Of Service	Coin mech all tubes error	No useable coin tubes. Machine unable to pay out

Error Message	Diagnostics Screen Text	Fault Description
Temporarily Out Of Service	Coin mech tube error	Problem with coin tube. Tube indicates full, but coin count is zero
Temporarily Out Of Service	Card reader comm	Fatal error. Cannot communicate with the card reader
Temporarily Out Of Service	Single card reader error	Transient error with card reader, but card reader in service. Unable to communicate with the card reader
Temporarily Out Of Service	Card reader reports a comm error	Repeatable error with card reader, but card reader in service. Unable to communicate with card reader
Temporarily Out Of Service	Card reader error	Problem with card reader. Manufacturing error detected
Temporarily Out Of Service	Card reader failed OOS error	Card reader is out of service
Temporarily Out Of Service	Card reader reports comm error & is OOS	Comm error with card reader. Out of service
Temporarily Out Of Service	Card jammed in card reader	Card jam
Temporarily Out Of Service	Card reader failure	Problem with card reader. Manufacturing error detected
Temporarily Out Of Service	Card reader requests servicing	Card reader needs servicing
Sorry Out Of Service Out Of Coffee	Out of coffee	Bean hopper or coffee containers empty

## 12.2 Heater Tank De-Scale Procedure (Instant & Freshbrew Machines)

To maintain correct water levels and water temperature the heater tank must be inspected regularly and, if necessary, be de-scaled. To ensure long and trouble-free operation, Crane Merchandising Systems recommend that all machines have a water filter fitted. We recommend and supply the Brita AquaQuell Compact water filter.

There are a number of ways of de-scaling the heater tank. The tank can be removed and scraped out with a blunt tool but it can also be left inside the machine and a de-scaling agent introduced into the tank. This eliminates the need to remove the thermistor, water level probe and all the outlet valves from the tank, saving time and money. Always remember to fit a new water filter and boiler seal after de-scaling.

Use the following steps as a guideline only and always refer to the instructions supplied with the de-scaling agents regarding dosage and de-scaling time.

1. Switch off the machine and open the door. Remove all canisters and back covers.
2. Using the drain hose fitted to the tank, remove the bung and drain the water from the heater into a suitable water tight container.



**Safety First!** Allow the water in the tank to cool before draining.

3. Once all of the water has drained from the tank, replace the bung into the drain hose. Introduce the de-scaling solution in the recommended dosage into the heater tank. Switch on the machine and allow the heater tank to fill.
4. Turn off the machine and leave for approximately 40 minutes before draining the tank again following the sequence described above.
5. Fit a new water filter and switch on the machine. Fill the tank and drain again until all traces of the de-scaler are removed (at least 3 times).
6. Switch on the machine and allow the heater tank to fill and to heat up. Drain and fill one more time. The machine is now ready to be put back in service.

## 12.3 Brewer Maintenance (Freshbrew Machines)

Freshbrew machines are fitted with a dual brewer unit which produces freshbrew coffee and tea beverages from the same unit. Routine cleaning and maintenance instructions for this unit can be found in the Genesis Operators Manual - Part No. PR1035001.

### 12.3.1 Removing The Brewer

Periodically it may be necessary to remove the brewer from the machine.

1. Open the door and insert the safety key. The machine is now **on**.
2. Using the [service keypad](#) (see page 69) mounted inside the door, press **Brewer Open** ([button 2](#)). The brewer will index to its fully open position and stop. Remove the safety key to turn the power off. Remove the brewer guard to gain access to the brewer unit.
3. Carefully remove both the coffee and tea water inlet pipes from the brewer. Remove the dispense pipe from the tea brewer and dispense pipe complete with outlet adaptor from the coffee brewer. Pull down the spring loaded brewer release pin and carefully remove the brewer unit from its locating bracket.

### 12.3.2 Removing The Filter Mesh Assemblies

Both the coffee brewer and tea brewer contain fine screen mesh assemblies which ensure coffee and tea vends are produced to the highest standards. To remove the mesh assemblies, proceed as follows:

1. Remove the brewer unit from the machine as previously described and place on a flat surface. Lift the latch bar and remove the brewer chambers/wipe arms assembly.
2. **Removing the coffee filter mesh:** Using the coffee filter extractor tool, part no. ME10385000, insert the tool into the output spout of the coffee brewer chamber with the tip pointing upwards.
3. With the tool to the rear of the chamber, gently push up on the rear of the filter assembly to unseat it. Remove the filter assembly from the brewer.
4. **Removing the tea filter mesh:** Using a small flat bladed screwdriver or similar, insert the tool up through the tea outlet and carefully push the filter assembly up and out of its location.
5. If necessary, soak the filter mesh assemblies in a correctly diluted cleaning solution for a maximum of 30 minutes. Rinse the filters with clean water before refitting to the brewer unit.
6. Replacement filters are available from the manufacturer.

Coffee Filter - Part No. PL07155000

Tea Filter - Part No. ME10380000

### 12.3.3 Refitting The Filter Mesh Assemblies

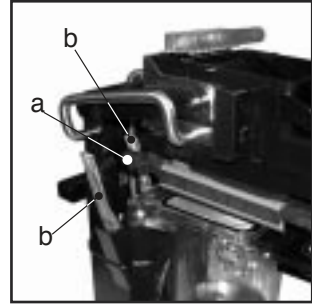
The following description applies to both the coffee and tea filter assemblies.

1. Ensuring that the gauze screen is to the top, align the filter assembly with its locating position above the brewer chamber. Ensure that the locating lip on the filter assembly lines up with its corresponding slot in the chamber.
2. Push down on the filter assembly to secure it in its locating position.

### 12.3.4 Re-assembling The Brewer To The Machine

1. Carefully slide the brewer chamber/wipe arms assembly into the brewer unit.

**Important!** The wiper arm lug (a) must be located between the stainless steel arms (b) as shown.

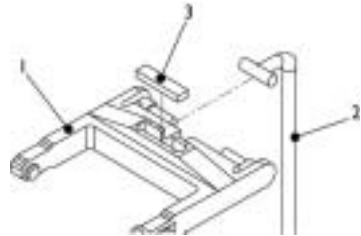


2. Line up the brewer unit with its mounting bracket ensuring that the drive shaft correctly engages with the brewer motor drive dog. Push the brewer unit into place and secure with the sprung pin.
3. Refit the coffee dispense pipe/outlet adaptor to the coffee brewer outlet and the tea dispense pipe to the tea brewer outlet. Re-assemble the coffee and tea water inlet pipes to their locating brackets.
4. Refit the brewer guard and close the front door of the machine. The machine will power up and the brewer will index to its home position.

### 12.3.5 Brew Chamber Tension Adjustment

If a leak develops between the brew chamber and the filter screen assembly during a brew cycle, it may be necessary to adjust the brew chamber tension arm. The leaking is an indication that the brew chamber is not closing correctly. Proceed as follows:

1. Open the door and insert the door switch safety key. The machine is now on. Press and hold the Brewer Open button (2) located in the service keypad. The brewer will move to its open position, when the brewer wiper arms are fully open release the button. Remove the safety key and remove the brewer from the machine.
2. Lift the latch bar and remove the brewer chambers/wipe arms assembly. Push down on the 'H' frame (1) and lift the T-bar (2) from the recess. Add shims (3) into the recess as required and replace the T-bar, increasing the height by only the thinnest shim.



Two shims are available and equate to a quarter turn and a half turn of the T-bar (2), using both shims equates to a three quarter turn.

**Important!** Do not add several shims at once as assembly may become over tensioned, causing damage to the brewer bearings and vertical rod housings.

3. Re-install the brew chambers/wipe arms assembly into the brewer and install the unit back into the machine. Insert the door switch safety key and allow the machine to power up. Test vend several freshbrew drinks through the brewer to ensure that the brew chambers assembly closes correctly and does not leak.

**N.B.** In most cases this procedure is enough to stop the leaking. Should the brewer still leak, repeat the above procedure, increasing the shim height by only the thinnest shim each time. If the thinnest shim is not enough, remove it and replace with the thicker shim, if that's not enough use both shims.

4. If both shims are used and the brewer is still leaking, check the brewer to ensure there is no loss of vacuum, usually caused by a cracked, worn or scored cylinder, or a worn teflon piston seal.
5. If these checks indicate there are no problems concerning the brewer the T-bar can be adjusted further. Remove the brewer from the machine as previously described.

**Important!** Only fully trained engineers are to proceed with the following adjustments. If the brewer is damaged as a result of non trained engineers proceeding with these adjustments CMS accepts no responsibility for any claims for the brewer under warranty.

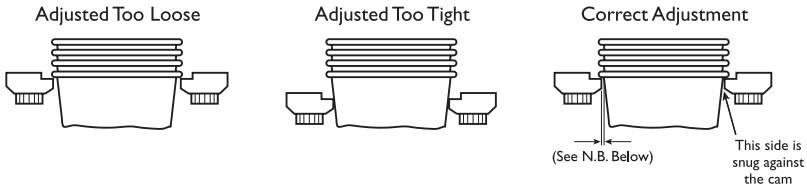
6. The T-bar restraining bracket must first be removed. Working at the rear of the brewer unscrew the two screws securing the rear support bracket and restraining bracket to the brewer.
7. Remove the restraining bracket. Remove all shims and turn the T-bar one complete turn clockwise. Re-attach the restraining and support brackets using the two screws, and locate the T-bar into the H frame. Re-install the brewer and test vend as above.

## 12.4 Adjusting The Cup Drop Mechanism

When changing the type or size of cup vended from the machine, it may also be necessary to adjust the cup drop mechanism to accommodate the new cups. Proceed as follows:

1. Open the front door and swing the cup turret assembly out of the machine. Carefully lift and remove the four transparent cup sleeves from the cup drop unit. Discard any cups that may be left over.

- Place a minimum of 4 new cups into the cup splitter. Observe the clearance as shown in the illustration below.



**N.B.** Clearance indicated in Correct Adjustment diagram should be no more than half the diameter of the cup lip (maximum) but just enough to allow for smooth cup ejection.

- If necessary adjust the cup ring to obtain the clearance as shown. Loosen the adjustment arm screw (a) and move the adjustment arm (b) until the correct clearance is achieved. Hold adjustment arm in place and retighten the adjustment screw.



**N.B.** Move the arm clockwise if adjusting for larger diameter cups and anti-clockwise for smaller cups.

- Switch on the power to the machine using the door switch safety key. Using the service keypad located in the rear of the door, press the **Cup Test** (button 7) and check that a cup is ejected correctly. Repeat this test several times to confirm that the mechanism is functioning correctly.
- Refit the transparent cup sleeves to the cup drop mechanism ensuring that the flat on the turret motor lines up with the flat in the turret spigot moulding. Fill the cup sleeves with cups. DO NOT touch cups with your hands. Allow the cups to drop into the cup sleeves directly from the packaging.
- Rotate the cup turret assembly back into its operating position, ensuring that the unit 'locks' into place. Remove the safety key and close the door.

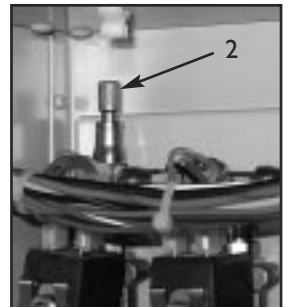
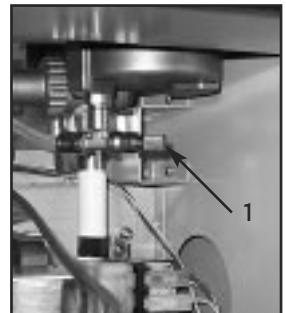
## 12.5 B2C System Drain Down (B2C Machines)

Should it become necessary for the engineer to work on the B2C water system or the machine requires draining prior pressure boiler maintenance etc., it is **very important** that the following sequence is followed to ensure safe working as well as correct system fill and heating when the machine is powered up.



## Machine cooling

1. Open the door and insert the door switch safety key. Ensure the waste tray is fitted correctly and empty. Using the service keypad located in the rear of the door, press the **Machine Cool Down** (button 10). The LCD will display the message shown opposite while approximately 13.5 fl. oz. (400ml) of cold water is flushed through the system and out to the waste tray.
- Important!** Pressing button 10 also informs the machine software that the B2C system has been drained ensuring that the B2C system will automatically fill before heating on power up. This is very important and **must not** be overlooked.
2. Once the B2C system has been cooled the LCD will display the message 'Machine cooled' and water will stop pumping through the system. Remove the waste tray and empty the contents before re-fitting to the machine.
  3. Remove the safety key from the door switch to turn off the power to the machine.
  4. Close the fresh beans outlet slide and remove the fresh beans container. Rotate ingredient canister outlets to upright position and remove the canisters. DO NOT place them on the floor.
  5. Loosen the 4 screws securing the top cover and remove. Remove the brewer waste bucket from the machine. Loosen the 4 screws securing the lower cover.
  6. Remove the lower cover from the machine to expose the boiler blanking plug (1). Hold the collar and remove the plug. Attach a length of silicone tube to the outlet to act as a drain. Place the trailing end into an empty bucket.
  7. Remove the air intake blanking plug (2) located in the top LH corner of the machine. All water will be ejected from the system via the boiler drain into the bucket allowing the engineer to safely work on system components.



To refill the system, proceed as follows:

1. Remove the drain tube from the boiler drain and replace the blanking plug. Refit the air intake blanking plug. Refit both the top and lower covers to the machine. Ensure all fixing screws are re-tightened.
2. Refit the fresh coffee beans container into the machine and open the outlet slide. Refit ingredient canisters into the machine, rotating outlets to their correct operating position. Refit the brewer waste bucket into the machine.
3. Insert the door switch safety key. The machine will initialise, priming the system with 13.5 fl. oz. (400ml) of water before returning to standby. Hold a suitable container under the dispense head during machine power up. Once in standby mode remove the safety key and close the door.

## 12.6 CoEx® Brewer/Bean Grinder Maintenance (B2C Machines)

Espresso machines are fitted with the unique CoEx® brewer unit which produces both fresh coffee and espresso based drinks from ground beans and freshbrew pre-ground coffee from the same unit. Routine cleaning and maintenance instructions for this unit can be found in the Genesis Operators Manual - Part No. PR10350001.

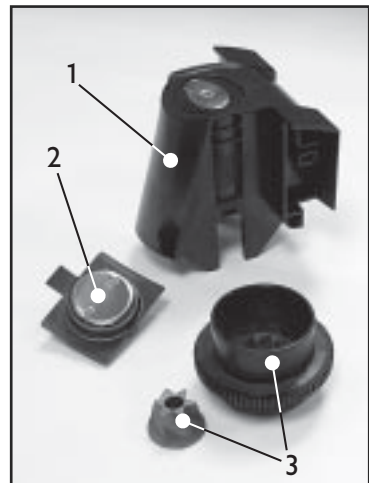
### 12.6.1 CoEx® Brewer/Grinder Blades - 50,000 Vend Service

Crane Merchandising Systems recommends that the brewer unit and bean grinder is serviced by an authorised engineer after every 50,000 vends.

A CoEx® service kit (part no. PH10820000, shown opposite) is available from the manufacturer and contains all of the components required to ensure the machine continues to give trouble-free service.

The service kit contains the following components (with part nos.):

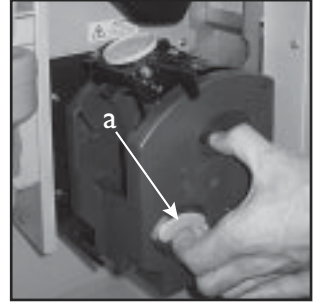
1. Lower piston and cylinder assembly - Pt. No. ME10592000
2. Filter head assembly - Pt. No. ME10284000
3. Grinder blades - Pt. No. ME07308000
4. 'O' ring - water inlet (not shown) - Pt. No. ME10595000



To carry out the 50,000 vend service, proceed as follows:

1. Disconnect the machine from the mains electricity. Open the front door of the machine.
2. Remove the coffee dispense pipe from the brewer outlet.

Holding the unit as shown in the photograph, lift the green lever (a) and carefully pull the brewer unit out of the machine.



3. Carefully unclip the wiper arm from the brewer unit and place to one side.

Remove the filter assembly from the brewer. Holding the filter assembly as shown, turn the green locking ring anti-clockwise to its open position, indicated by the two arrows.

Carefully remove the old filter unit down and out of the CoEx® brewer unit. Discard the used filter unit.



4. Using a 3mm allen key, remove the bolt securing the brewer drive coupling to the input shaft. Pull the coupling off of the shaft and place to one side.

Ensure that the captive lock nut is retained in the drive coupling moulding.



5. Working from the front of the brewer, unscrew and remove the three retaining screws which secure the brewer unit together.

Carefully ease both the front and rear brewer panels away from the central piston chamber/swing arms assembly.



6. Holding the unit as shown in the photograph, rotate the lower piston and cylinder assembly clockwise and then remove it up and out of the swing arms/filter holder assembly.

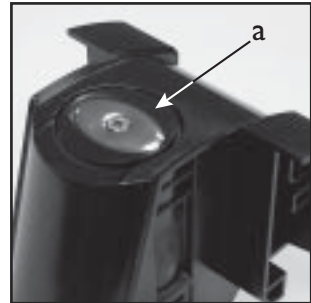
Discard the used lower piston and cylinder assembly.

Clean all of the dismantled brewer components thoroughly to remove all traces of waste coffee product.



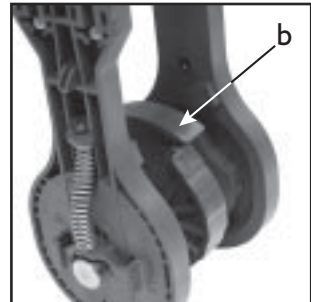
7. Take the new lower piston and cylinder assembly from the service kit.

Before assembling the unit to the swing arms/filter holder assembly, ensure that the lower piston (a) is at the top of its stroke as shown in the photograph.



8. Ensure that the piston drive cam (b) is positioned as shown.

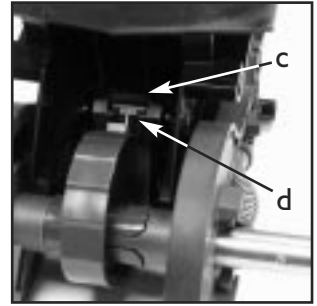
If necessary, push the piston drive cam anti-clockwise until it reaches its stop position.



9. Holding the lower piston and cylinder assembly as shown, guide the assembly into the swing arms/filter holder assembly.



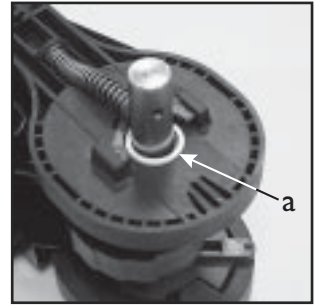
10. Check and ensure that the lower piston guide block (c) locates with the piston drive cam (d) as shown in the photograph.



11. Ensure that the plastic washer (a) is fitted correctly over the input shaft (long side) as shown.

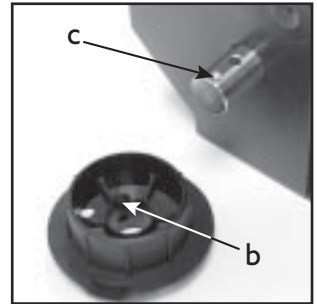
Re-assemble the front and rear brewer panels to the central piston chamber/swing arms assembly using the three retaining screws/locknuts.

Check and ensure that the brewer release lever mechanism operates correctly.



12. Re-fit the brewer drive coupling to the input shaft ensuring that the raised 'pip' (b) lines up with its locating dimple (c) on the input shaft.

Ensure that the captive lock nut is retained in the plastic drive coupling moulding. Using a 3mm allen key, refit the bolt to secure the brewer drive coupling to the input shaft.



13. Take the new filter head assembly from the service kit.

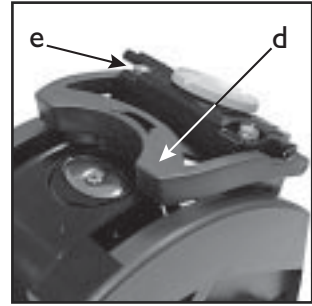
Holding the new filter assembly as shown, turn the green locking ring anti-clockwise to its open position, indicated by the two arrows.

Place the filter unit up into the filter holder and turn the green locking ring clockwise to lock it into place.



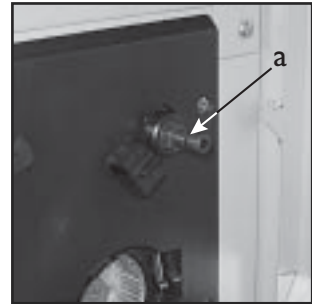
14. Re-assemble the wiper arm (d) to the filter holder assembly

Ensure that the wiper arm is located under the coffee outlet pipes as shown (e).



15. Moving to the machine, remove the 'O' ring (a) from the water inlet pipe and discard. Fit the 'O' ring included in the service kit onto the inlet pipe. Ensure that the new 'O' ring is seated correctly.

Refit the CoEx® brewer unit into the machine. Slide the unit into place until it 'clicks' into position. Refit the coffee dispense pipe to the brewer outlet.

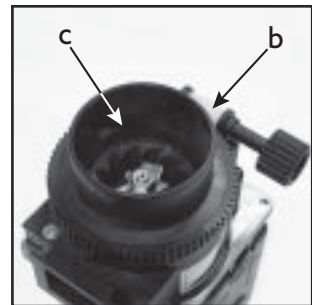


## 16. Replacing The Grinder Blades

Push in the bean canister shut-off to close the fresh beans outlet. Carefully remove the fresh beans canister from the machine and place it to one side.

Pull up and remove the grinder adjusting wheel assembly (b) from the rear of the grinder body.

Unscrew the grinder body (c) anti-clockwise and remove it from the blade housing.



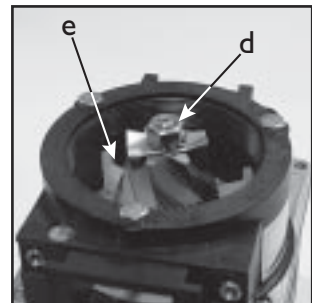
**Note:** Grinder mechanism removed from the machine for clarity

17. Unscrew and remove the nut, star washer and agitator (d) from the drive shaft.

**Note:** Nut is fitted with a left hand thread.

Remove the grinder blade block (e) and discard. Replace with the new grinder blade block included with the service kit.

Refit the agitator, star washer and nut. Ensure that the nut is tightened securely.



18. Take the new grinder body complete with inner grinder ring from the service kit. Screw the grinder body clockwise into the blade housing until it stops.

Re-set the grinder blades. An approximate starting position is achieved by turning the grinder body back one full turn anti-clockwise.

Re-assemble the grinder adjuster wheel assembly to the grinder unit.

19. Refit the fresh beans container to the machine. Pull the bean canister shut-off to its fully extended position.
20. Turn on the electricity supply to the machine.

**Important!** Before returning the machine to service, the engineer must carry out the Grinder Calibration routine described on page 42 to ensure correct operation of the grinder with the type of beans used in the machine.

Use the grinder adjuster wheel to fine tune the blade settings in order to obtain the desired grind quality.





## Section 13 - Spare Parts

The following section details the spare parts that are available for the Genesis. Use of these genuine components when servicing or repairing the machine will significantly increase the working life of the machine.

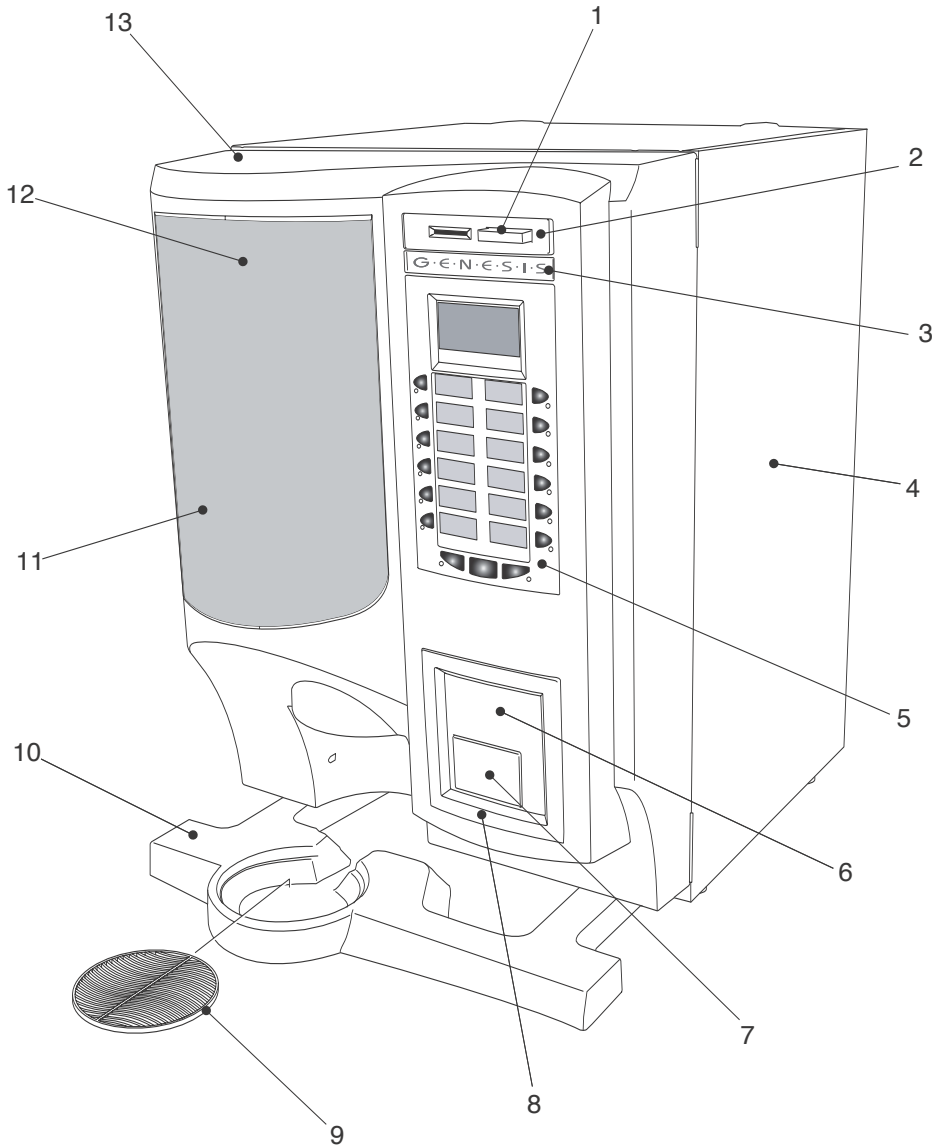
**For all spare parts sales and enquiries:**

**Telephone:** 01249 667321

**Fax:** 01249 461508

**Email:** [spares@cranems.co.uk](mailto:spares@cranems.co.uk)

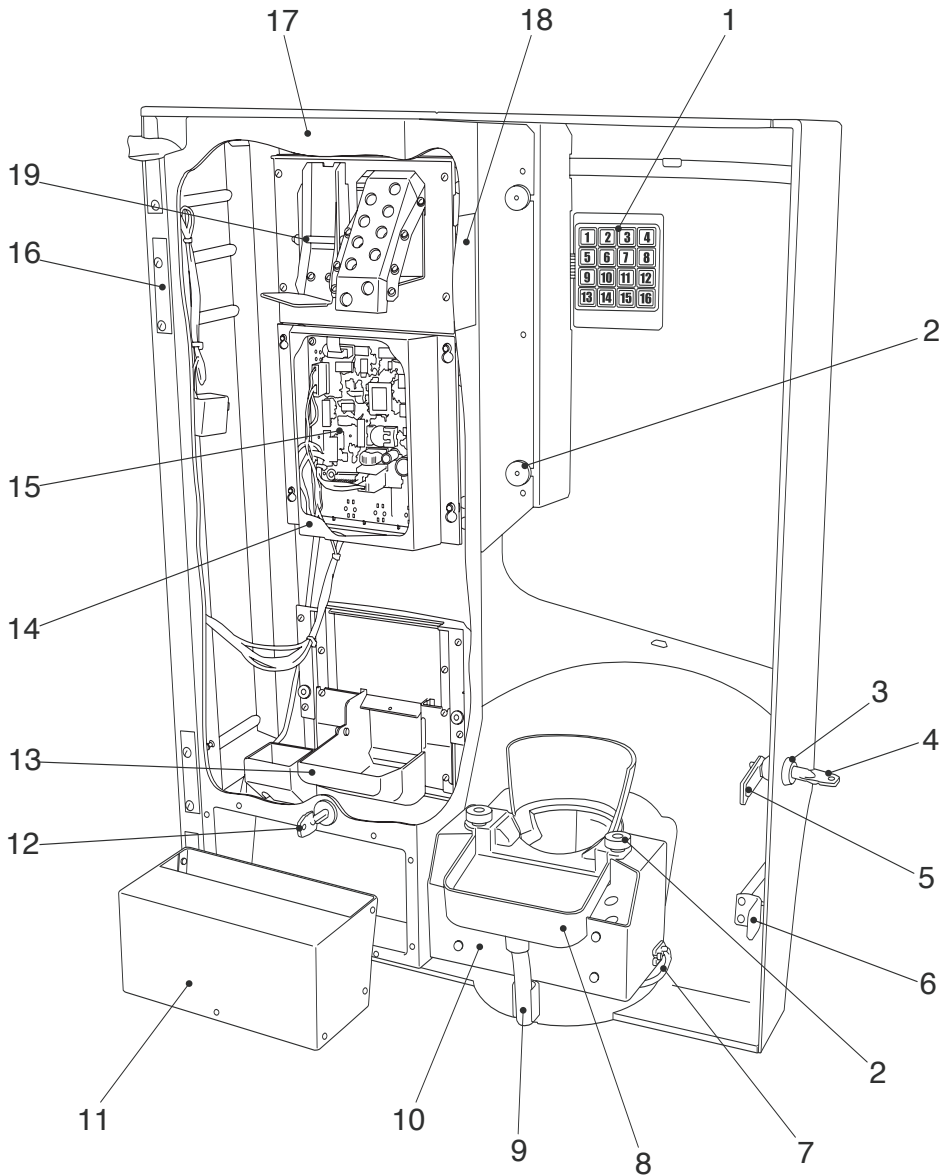
## Exterior View



## Exterior View

Ref. No.	Part No.	Item Description
1	PL10005250	Coin Reject Button
2	(a) PL10003250	Coin Entry Moulding
	(b) PL10004250	Blank Moulding - Free Vend
3	PR10224000	Genesis Name Badge
4	(a) MT10091000	Side Panel - L.H. (Instant & FB)
	(b) MT10092000	Side Panel - R.H. (Instant & FB)
	(c) MT10437000	Side Panel - L.H. (B2C)
	(d) MT10438000	Side Panel - R.H. (B2C)
5		<a href="#">Console Assembly</a> (see page 141)
6	(a) MT10168250	Coin Return Plate
	(b) MT10742250	Coin Return Plate & Jug Key
	(c) MT10178250	Blank Plate - Free Vend
	(d) MT10790250	Blank Plate - Free Vend & Jug Key
	(e) MT10359250	Fage Giotto Mounting Plate
	(f) MT10179250	Girovend Sapphire Mounting Plate
	(g) MT10361250	Mars Smartcard Mounting Plate
	(h) MT10180250	VMC Mounting Plate
	(i) MT10360250	Zip Mounting Plate
	(j) MT10733250	Zip Coin Return Plate
7	MT10169250	Coin Return Flap
8	PL10007250	Coin Return Moulding
9	PL10014000	Waste Tray Grille
10	PL10008000	Waste Tray
11	PL10010000	Graphic Panel Cover - Transparent
12	(a) GR10240000	Graphic Panel - Aqua Blue
	(b) GR10241000	Graphic Panel - Slate Red
	(c) GR10242000	Graphic Panel - B2C
13	PL10001310	Door Moulding
		<a href="#">Base Cabinet &amp; Waste Equipment</a> (see 203)
		<a href="#">Optional Payment System Equipment</a> (see page 205)

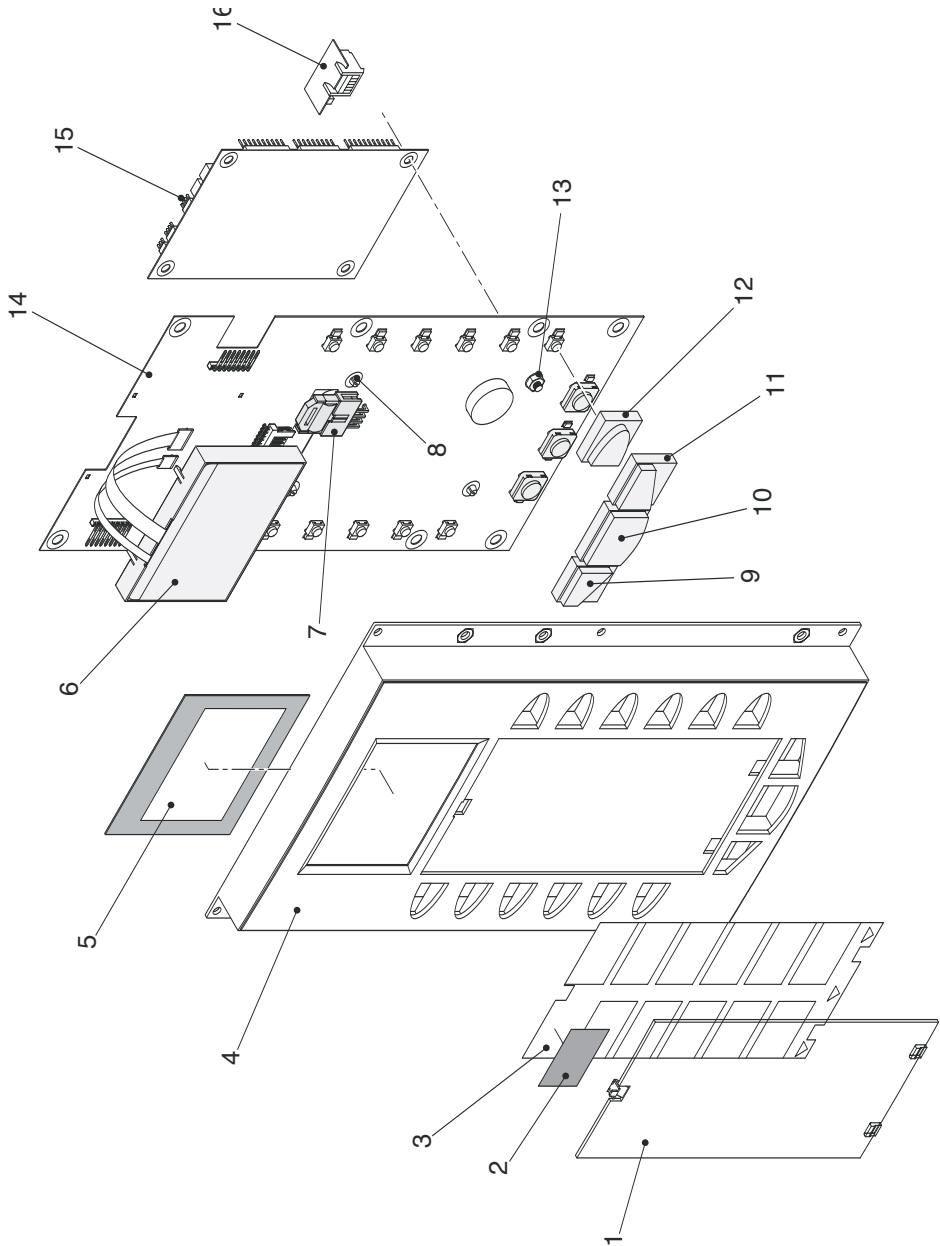
## Door Interior



## Door Interior

Ref. No.	Part No.	Item Description
1	EL10025000	Service Keypad (obsolete from serial no. starting 1634...)
	EL10025001	Service Keypad
2	FA01416000	Knurled Thumb Nut - M5
3	ME02857000	Door lock
4	ME00933000	Key - No. 2101
5	MT05222000	Door Lock Cam
6	MT07119000	Door Switch Actuator
7	LO10264001	SureVend™ Cup Sensor and Harness Assy
8	(a) PL04863000	Cup Catcher Moulding - Squat Cup
	(b) PL04864000	Cup Catcher Moulding - Tall Cup
9	SI01142960	Silicon Pipe
10	MT10177000	Cup Chute Mounting Bracket
11	MT10172000	Cashbox
12	(a) ME01859000	Cashbox Lock
	(b) MT06635000	Cashbox Lock Cam
	(c) ME03333000	Cashbox Key - No. 300245B
13	PL10006000	Coin Return Bowl Moulding
14	MT10175000	Control Board Cover
15		<a href="#">Control Board</a> (see page 141)
16	WO07022000	Door Hinge
17	(a) MT10389000	Inner Door Assembly - Coin Mech.
	(b) MT10181000	Inner Door Assembly - Free vend/Cashless
	(c) MT11232250	Inner Door Assembly - ZIP & WFM
	(d) MT10734250	Loom Guide - required with the ZIP door assy
18	(a) PR10916001	Internal Decal Set - English
	(b) PR10987001	Internal Decal set - German
	(c) PR11377000	Internal Decal set - French
19	ME10260000	Tension spring

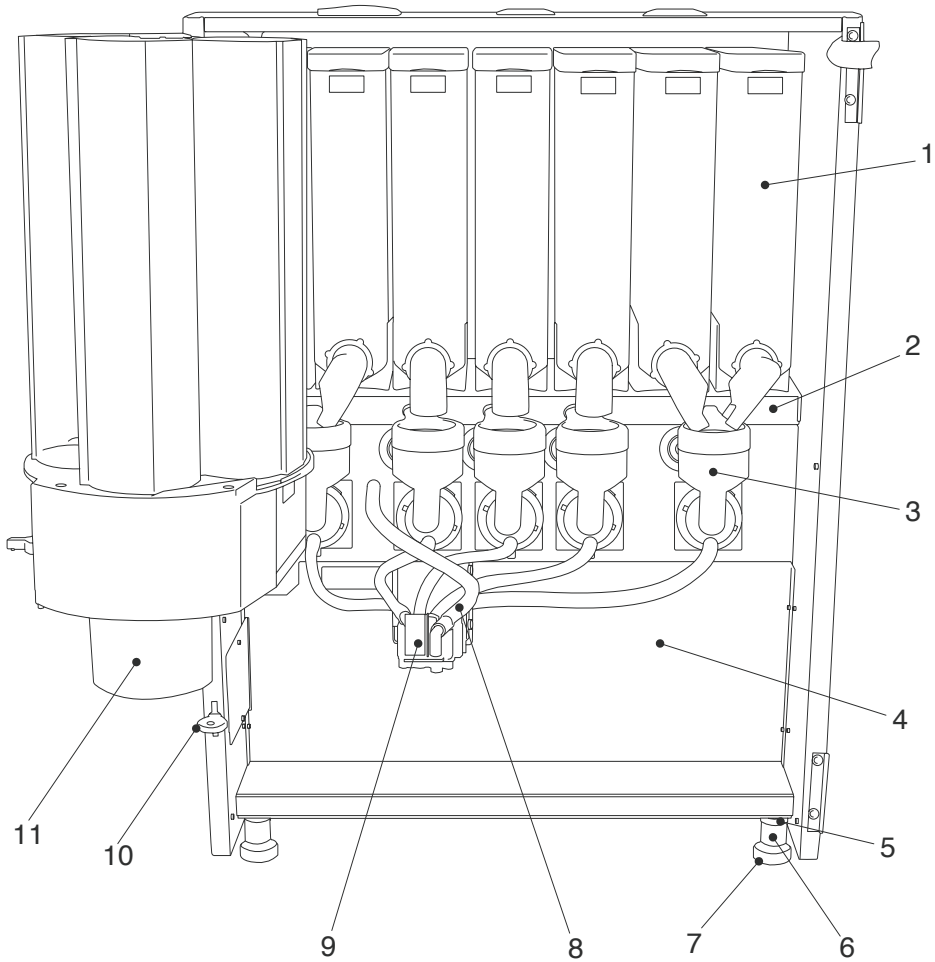
## Console Assembly



## Console Assembly

Ref. No.	Part No.	Item Description
1	PL10011000	Selection Cover Moulding - Transparent
2	(a) PR10233000	Selection Decals - English
	(b) PR10234000	Price Decal Sheet - U.K.
	(c) PR10235000	Price Decal Sheet - Euro's
3	(a) GR10236000	Selection Backer - Aqua Blue
	(b) GR10237000	Selection Backer - Slate Red
	(c) GR10238000	Selection Backer - Bean to Cup
4	PL10002250	Console Moulding
5	PL10040000	LCD Cover
6	EL10024000	LCD Display
7	LO10225000	Link Loom Console (To MPU PCB)
8	FA10222000	PCB Stand Of
9	PL10031000	Milk Selection Button
10	PL10032000	Start Button
11	PL10033000	Sugar Selection Button
12	PL10012000	Selection Button
13	(a) FA10223000	PCB Mount - Brass
	(b) FA01506000	Nut - M4
14	EL10039000	Console PCB
15	(a) PH10256AAU	PCB - Instant AA (Option 1 Decaff)
	(b) PH10256ABU	PCB - Instant AB (Option 2 Soup)
	(c) PH10256AFU	PCB - Double F/B AF (Option 1)
	(d) PH10256AGU	PCB - Double F/B AG (Option 2 Instant coffee)
	(e) PH10256AQU	PCB - B2C
	(f) EL10256000	MPU PCB - unprogrammed board
16	EL10266000	Executive Interface PCB *
* Required if Executive protocol coin mechanism or cashless system is fitted.		

## Interior View - Instant Machines

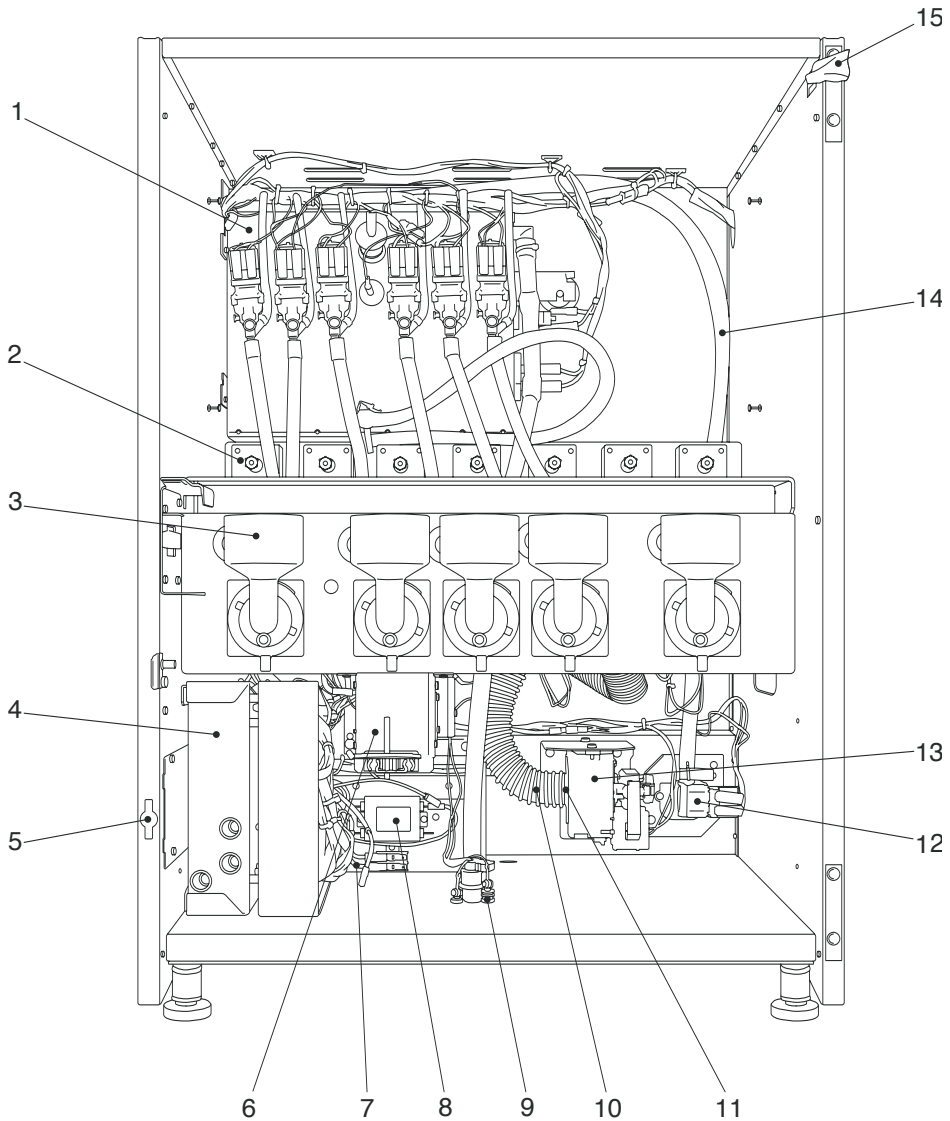




## Interior View - Instant Machines

Ref. No.	Part No.	Item Description
1		<a href="#">Tall Canister Assembly</a> (see page 161)
2	(a) MT10076250	Extract Tray - Five Whippers
	(b) MT10075250	Extract Tray - Six Whippers
3		<a href="#">Mixing System</a> (see page 173)
4	MT10078000	Cover Panel - Lower
5	FA10255000	Washer - M10
6	FA07112000	Spacer - M10 x 20
7	ME05281001	Foot - M10 x 45
8	SI01171960	Silicone Pipe - Hot Water
9		<a href="#">Dispense Head Assembly</a> (see page 169)
10	PL06334000	Service Key
11		<a href="#">Cup Drop Assembly</a> (see page 159)

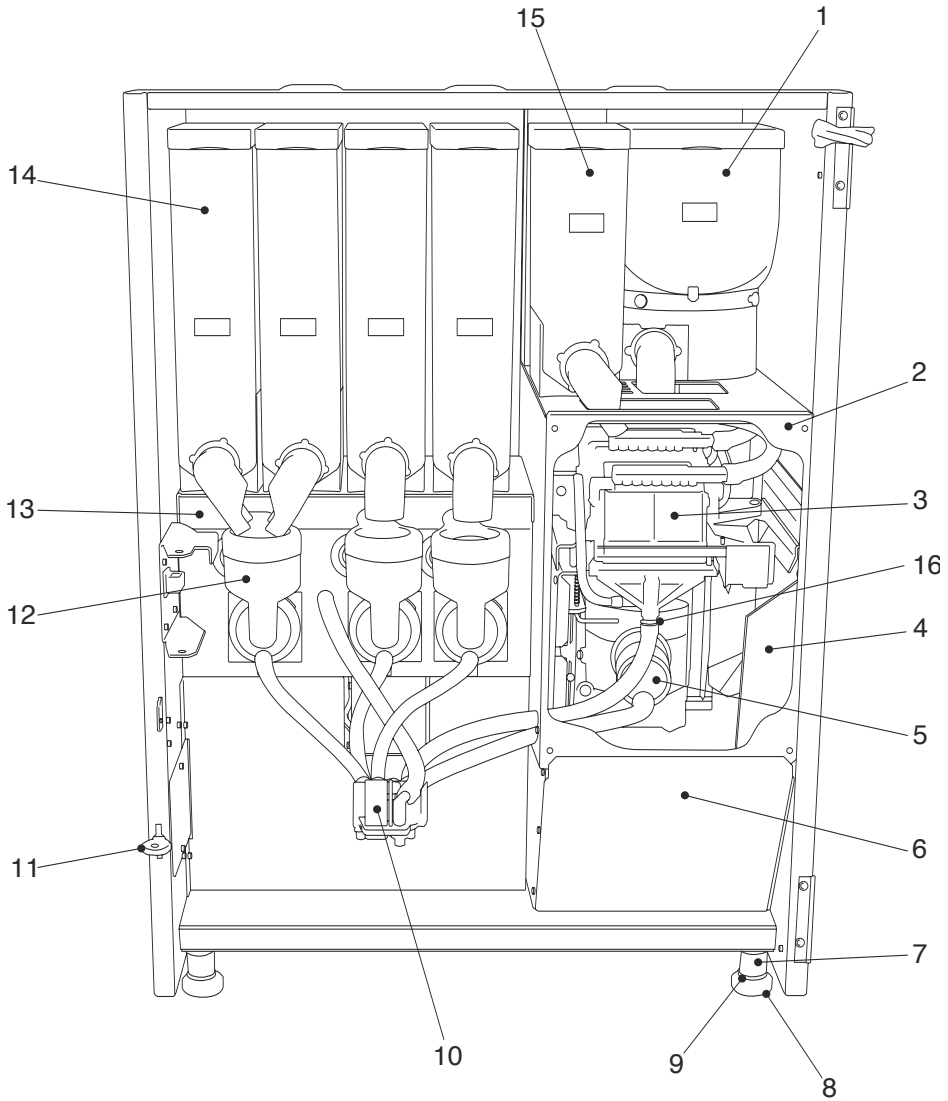
## Interior View - Instant Machines (Covers Removed)



## Interior View - Instant Machines (Covers Removed)

Ref. No.	Part No.	Item Description
1		<a href="#">Boiler Assembly</a> (see page 171)
2	(a) MO10151000	Ingredient Motor, 24v DC - 90 rpm (obsolete from serial no. starting 1634..., all motors are now the 130 rpm motors)
	(b) MO10152000	Ingredient Motor, 24v DC - 130 rpm
3		<a href="#">Mixing System</a> (see page 173)
4		<a href="#">Power Supply Assembly</a> (see page 175)
5	EL01157000	Door Interlock Switch
6		<a href="#">Dispense Head Assembly</a> (see page 169)
7	LO10113000	Loom 240v Power (obsolete from serial no. starting 1634...)
8	(a) EL01154000	Mains Filter (the following three parts are obsolete from serial no. starting 1634....)
	(b) EL10193000	Connector Block
	(c) EL10194000	End Plate
	(d) MT10106000	Filter Mounting Bracket
9	(a) FA05209000	Grommet - Red Silicone
	(b) ME05208000	Float Detector Spring
10	HO01139000	Hose
11	PL03083000	Hose Adaptor
12	(a) VA10147000	Inlet Valve 24v DC
	(b) HO02445000	Hose c/w Non-Return Valve
13	ME10182000	Extract Fan
14	HO06632000	Aquavend 10 Hose - 1 Metre
15	LO10111000	Main Loom
	LO10111001	Main Loom (post serial no. starting 1634....)
	LO10815000 *	Mains Lead - UK 13A
	* not illustrated	

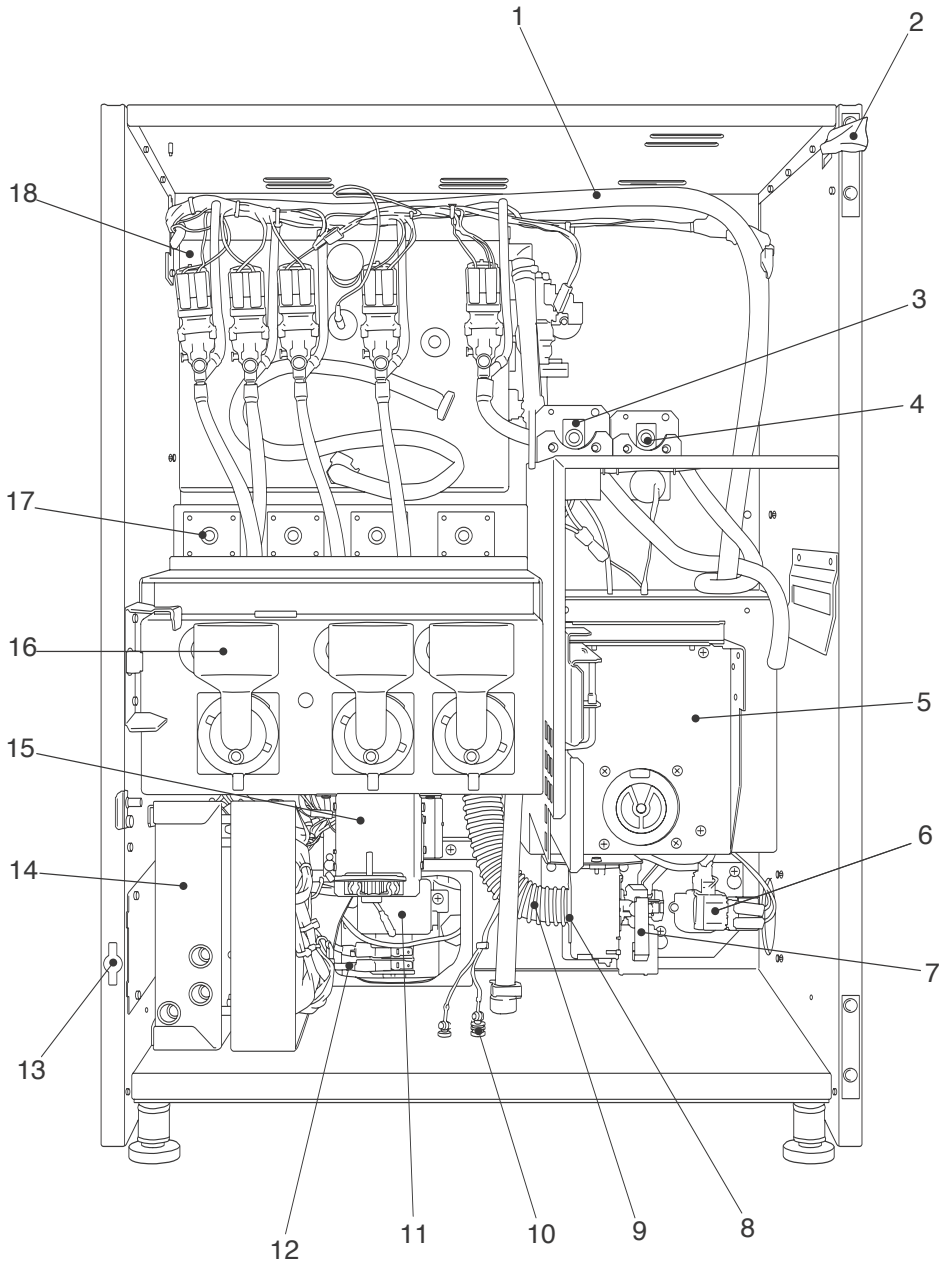
## Interior View - Freshbrew Machines



## Interior View - Freshbrew Machines

Ref. No.	Part No.	Item Description
1		<a href="#">Freshbrew Coffee Canister</a> (see page 165)
2	MT10090000	Brewer Cover
3		<a href="#">Single/Double Freshbrew Brewer</a> (see page 179)
4	MT10110000	Brewer Side Tray
5	SA06075000	Outlet Adaptor Kit
6	PL10280000	Freshbrew Waste Container
7	FA07112000	Spacer - M10 x 20
8	ME05281001	Foot - M10 x 45
9	FA10255000	Washer - M10
10		<a href="#">Dispense Head Assembly</a> (see page 169)
11	PL06334000	Service Key
12		<a href="#">Mixing System</a> (see page 173)
13	MT10083000	Extract Tray - Freshbrew
14		<a href="#">Tall Canister Assembly</a> (see page 161)
15		<a href="#">Freshbrew Tea Canister</a> (see page 163)
16	PL10827000	Regulator, Tea Funnel Outlet
	PL00228000 *	Hose Clamp - used during brewer cleaning
	* not illustrated	

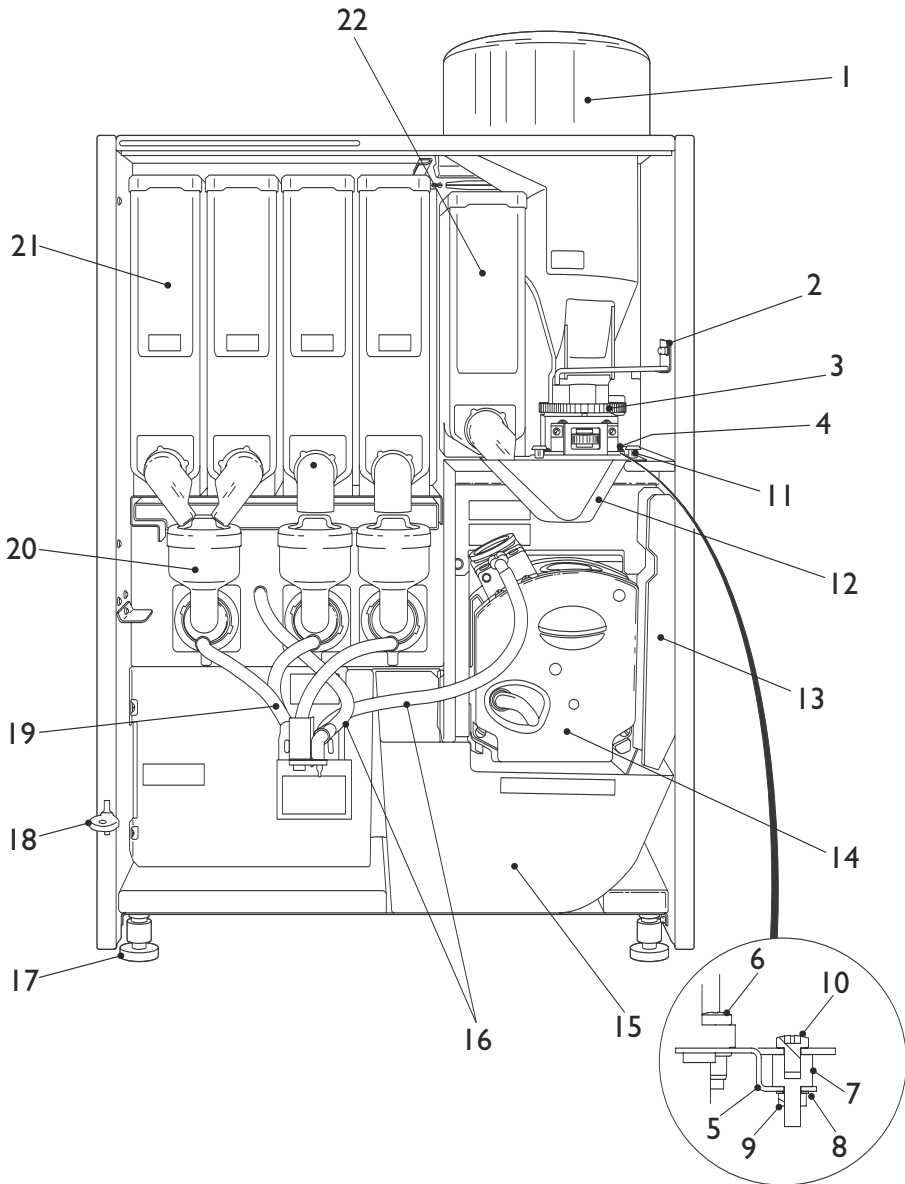
## Interior View - Freshbrew Machines (Covers Removed)



## Interior View - Freshbrew Machines (Covers Removed)

Ref. No.	Part No.	Item Description
1	HO06632000	Inlet Hose - Aquavend 10
2	LO10111000	Main Loom
	LO10111001	Main Loom (post serial no. starting 1634....)
3	MO10151000	Motor - 90 rpm, 24v DC (F/B Tea) (obsolete from serial no. starting 1634....)
4	MO10265000	Motor - 90 rpm, 24v DC (F/B Coffee) (obsolete from serial no. starting 1634....)
	MO11139000	Motor - 130 rpm, 24v DC (new motor replacing the two 90 rpm motors)
5		<a href="#">Brewer Motor Assembly</a> (see page 177)
6	(a) VA10147000	Inlet Valve, 24v DC
	(b) HO02445000	Hose c/w Non-Return Valve
7	ME10182000	Extract Fan
8	PL03083000	Hose Adaptor
9	HO01139000	Hose
10	(a) FA05209000	Grommet - Red Silicone
	(b) ME05208000	Float Detector Spring
11	(a) EL01154000	Mains Filter (the following three parts are obsolete from serial no. starting 1634....)
	(b) EL10193000	Connector Block
	(c) EL10194000	End Plate
	(d) MT10106000	Filter Mounting Bracket
12	LO10113000	Loom 240v Power (obsolete from serial no. starting 1634)
13	EL01157000	Door Interlock Switch
14		<a href="#">Power Supply Assembly</a> (see page 175)
15		<a href="#">Dispense Head Assembly</a> (see page 169)
16		<a href="#">Mixing System</a> (see page 173)
17	(a) MO10151000	Ingredient Motor, 24v DC - 90 rpm (obsolete from serial no. 1634..., all motors are now the 130 rpm motors)
	(b) MO10152000	Ingredient Motor, 24v DC - 130 rpm
18		<a href="#">Boiler Assembly</a> (see page 171)
	LO10815000 *	Mains Lead - UK 13A
	* not illustrated	

## Interior View - B2C Machines

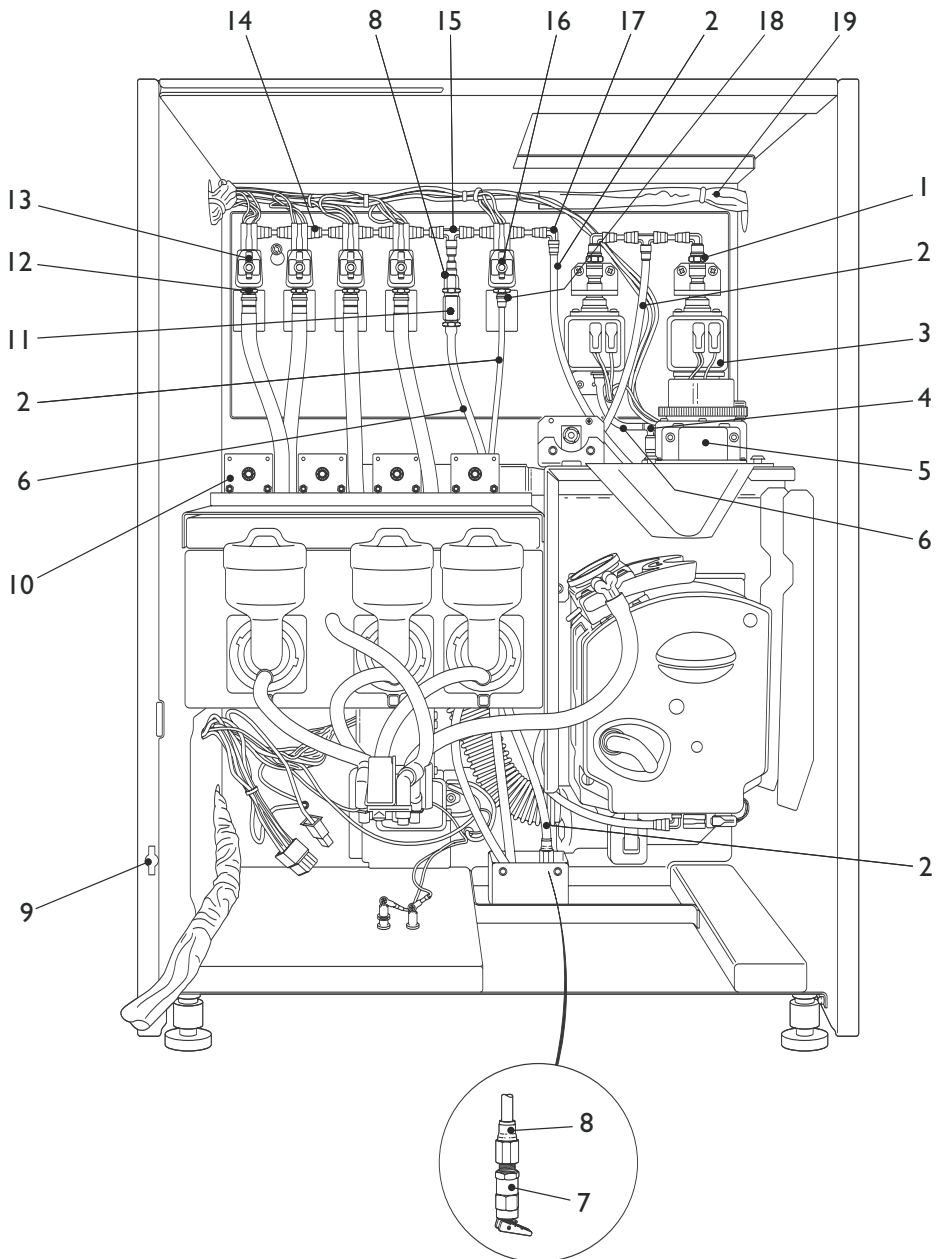




## Interior View - B2C Machines

Ref. No.	Part No.	Item Description
1		<a href="#">Fresh Beans Container</a> (see page 195)
2	MT10143000	Bean Container Keep Bar
3	MO10108001	Grinder & Motor Assembly
4		Grinder Fixings (pre serial no. starting 1634....)
	(a) FA02029000	Posi Pan Head Screw - M4 x 20
	(b) FA05209000	Grommet, Red Silicone
	(c) FA03262000	Lock Nut - M4
4		Grinder Fixings - includes items 5 to 10 (post serial no. starting 1634....)
5	MT10966000	Grinder Mounting Bracket
6	FA04340000	Posi Pan Head Screw - M4 x 16
7	ME10988000	Bobbin Mount - M/F M4
8	FA03197000	Washer, Shake Proof - External
9	FA01506000	Nut - Full M4
10	FA01502000	Posi Pan Head Screw - M4 x 6
11	FA07111000	Knurled Thumbscrew M4 x 10
12	PL10540000	Coffee Chute Moulding
13	MT10131000	Waste Chute
14		<a href="#">CoEx® Brewer Assembly</a> (see page 185)
15	PL10550000	Coffee Waste Bucket
16	SI04345960	Silicone Pipe - Hot Water/Coffee
17	(a) ME05281001	Foot
	(b) FA07112000	Spacer
	(c) FA10255000	Washer - M10
18	PL06334000	Service Key
19	SI01171960	Silicone Pipe
20		<a href="#">Mixing System</a> (see page 173)
21		<a href="#">Tall Canister Assembly</a> (see page 161)
22		<a href="#">5reshbrew Coffee Canister</a> (see page 165)

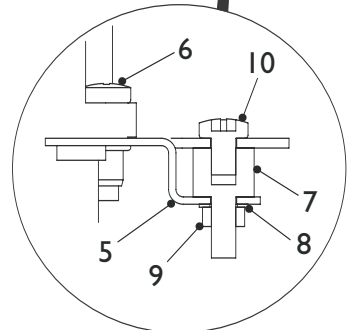
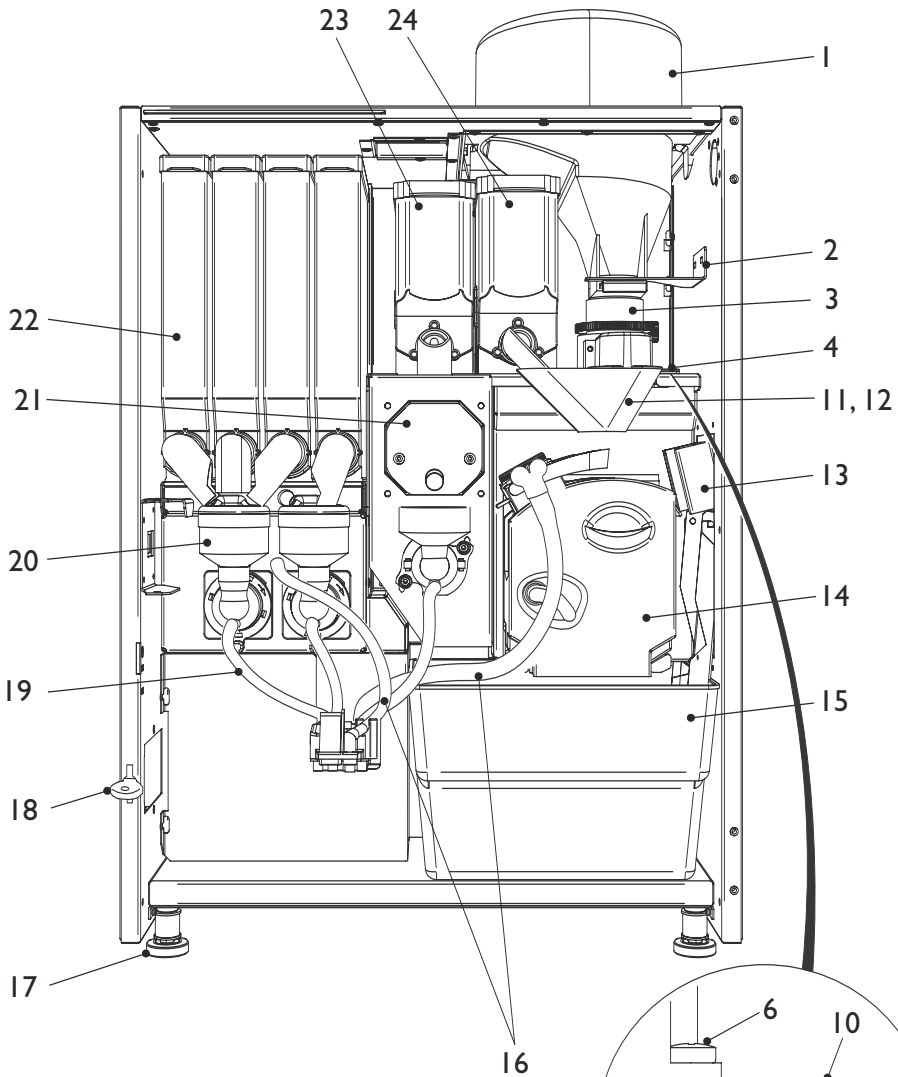
## Interior View - B2C Machines (Covers Removed)



## Interior View - B2C Machines (Covers Removed)

Ref. No.	Part No.	Item Description
1	ME10208000	Coupling, Extended Male Elbow
2	HO10245000	FEP Tube, 6mm OD
3	ME10047000	Pump
4	PL10246000	Tee Piece, Nylon
5	PL10282000	Coffee Outlet, Grinder
6	SI10538000	Silicone Tube, 4mm ID
7	VA10044000	Pressure Relief Valve - 3 Bar
8	ME10211000	Coupling, Female
9	EL01157000	Door Interlock Switch
10	(a) MO10151000	Ingredient Motor, 24v DC - 90 rpm (obsolete from serial no. starting 1634..., all motors are now the 130 rpm motors)
	(b) MO10152000	Ingredient Motor, 24v DC - 130 rpm
11	VA10043000	Pressure Relief Valve - 12 Bar
12	ME10209000	Coupling, Male - Stand Pipe
13	VA10041000	Valve, 3 Way
14	ME10207000	Coupling, Male - Branch 'T'
15	ME10216000	Coupling - 'T' Piece
16	VA10042000	Valve, 2 Way
17	ME10217000	Coupling, Elbow
18	ME10218000	Male Coupling
19	LO10157000	Main Loom
	LO10157001	Main Loom (post serial no. starting 1634....)
	LO10815000 *	Mains Lead - UK 13A
	* not illustrated	

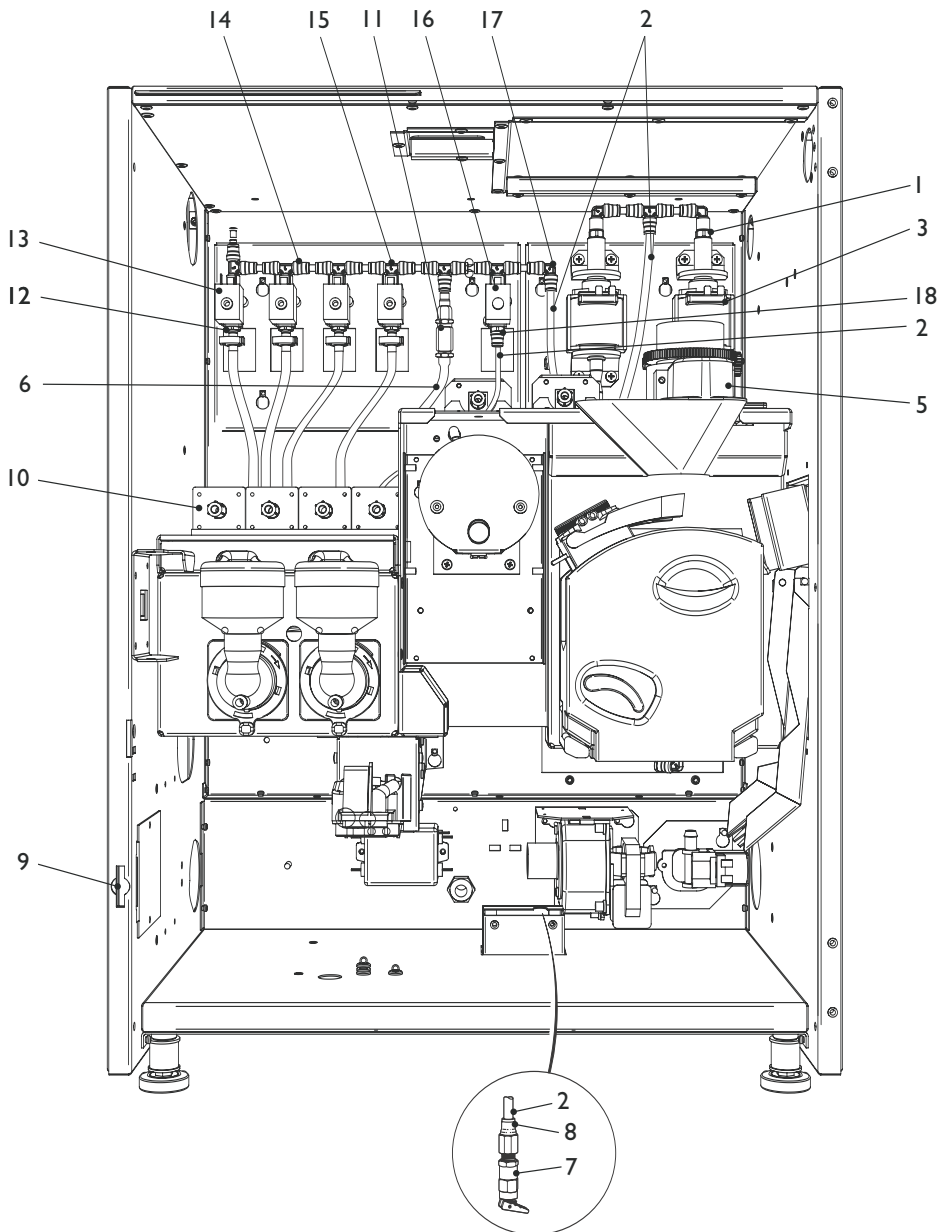
## Interior View - B2C & Teapot Machines



## Interior View - B2C & Teapot Machines

Ref. No.	Part No.	Item Description
1		<a href="#">Fresh Beans Container</a> (see page 195)
2	MT10143000	Bean Container Keep Bar
3	MO10108001	Grinder & Motor Assembly
4		Grinder Fixings - includes items 5 to 10
5	MT10966000	Grinder Mounting Bracket
6	FA04340000	Posi Pan Head Screw - M4 x 16
7	ME10988000	Bobbin Mount - M/F M4
8	FA03197000	Washer, Shake Proof - External
9	FA01506000	Nut - Full M4
10	FA01502000	Posi Pan Head Screw - M4 x 6
11	FA07111000	Knurled Thumbscrew M4 x 10
12	PL10540000	Coffee Chute Moulding
13	MT10131000	Waste Chute
14		<a href="#">CoEx® Brewer Assembly</a> (see page 185)
15	PL10550000	Coffee Waste Bucket
16	SI04345960	Silicone Pipe - Hot Water/Coffee
17	(a) ME05281001	Foot
	(b) FA07112000	Spacer
	(c) FA10255000	Washer - M10
18	PL06334000	Service Key
19	SI01171960	Silicone Pipe
20		<a href="#">Mixing System</a> (see page 173)
21		<a href="#">Teapot Assembly</a> (see page 187)
22		<a href="#">Narrow Canister Assembly</a> (see page 161)
23		<a href="#">Canister Assembly - Teapot</a> (see page 163)
24		<a href="#">Freshbrew Coffee Canister</a> (see page 163)

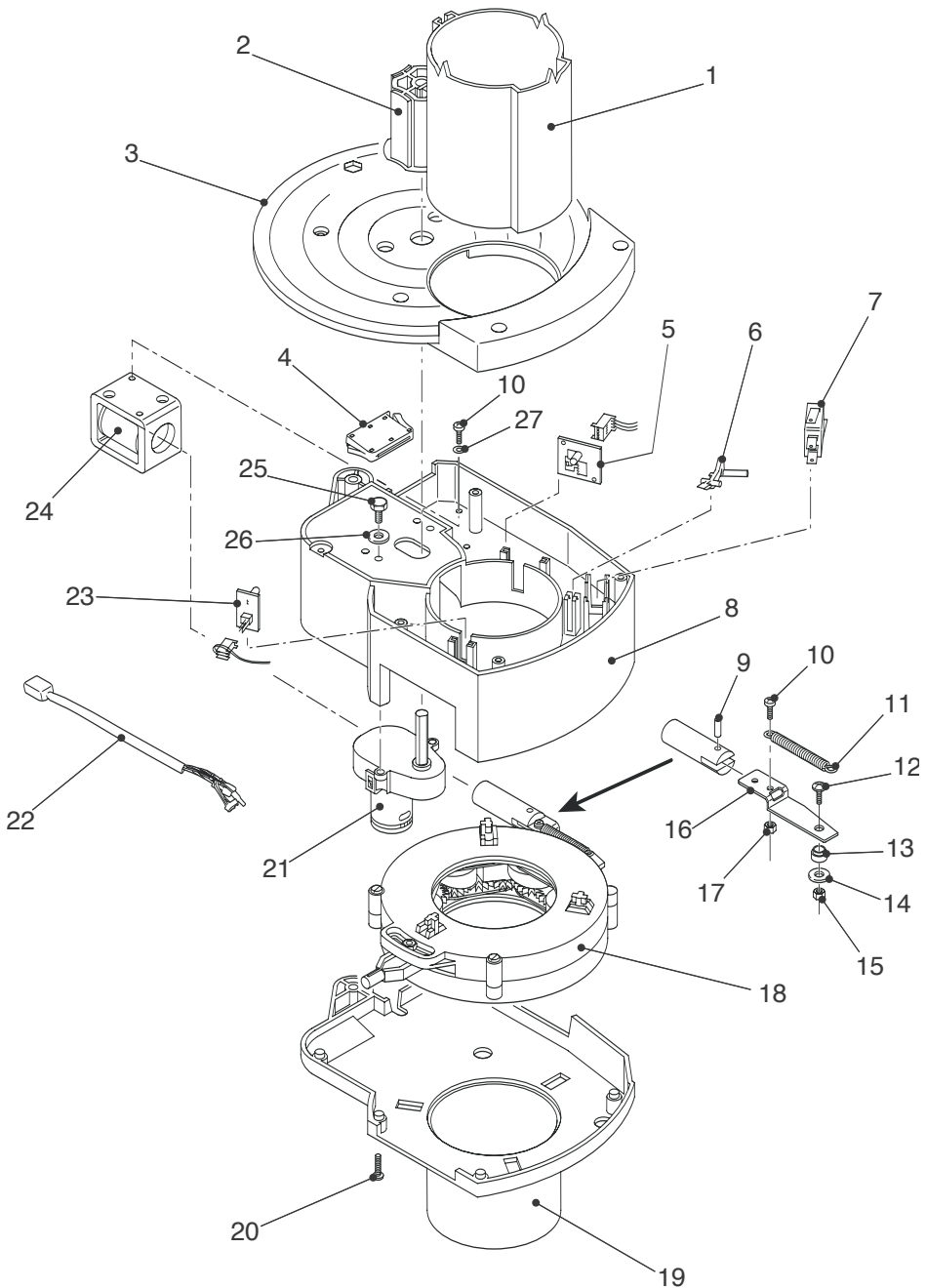
## Interior View - B2C & Teapot Machines (Covers Removed)



## Interior View - B2C & Teapot Machines (Covers Removed)

Ref. No.	Part No.	Item Description
1	ME10208000	Coupling, Extended Male Elbow
2	HO10245000	FEP Tube, 6mm OD
3	ME10047000	Pump
4	PL10246000 *	Tee Piece, Nylon
5	PL10282000	Coffee Outlet, Grinder
6	SI10538000	Silicone Tube, 4mm ID
7	VA10044000	Pressure Relief Valve - 3 Bar
8	ME10211000	Coupling, Female
9	EL01157000	Door Interlock Switch
10	MO10152000	Ingredient Motor, 24v DC - 130 rpm
11	VA10043000	Pressure Relief Valve - 12 Bar
12	ME10209000	Coupling, Male - Stand Pipe
13	VA10041000	Valve, 3 Way
14	ME10207000	Coupling, Male - Branch 'T'
15	ME10216000	Coupling - 'T' Piece
16	VA10042000	Valve, 2 Way
17	ME10217000	Coupling, Elbow
18	ME10218000	Male Coupling
19	LO11406000 *	Main Loom
	LO10815000 *	Mains Lead - UK 13A
	* not illustrated	

## Cup Drop Unit Assembly

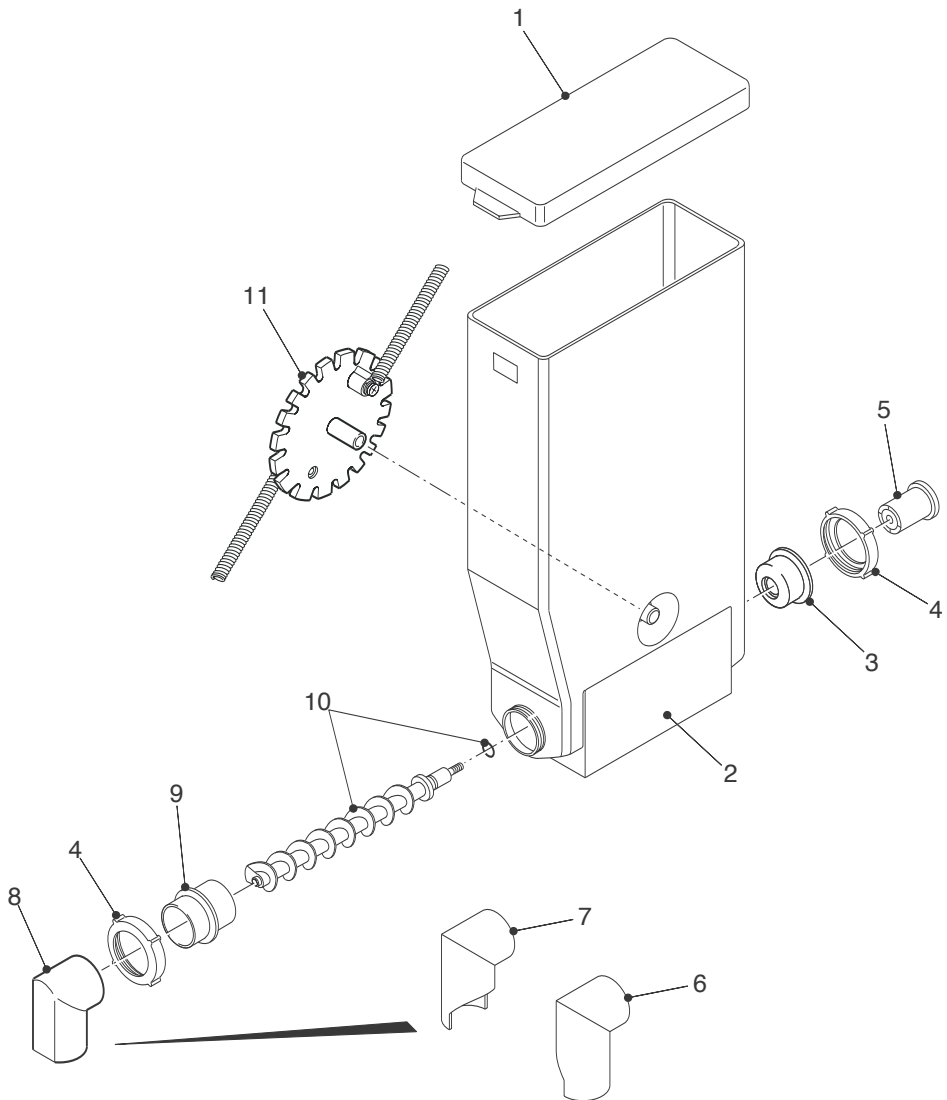




## Cup Drop Unit Assembly

Ref. No.	Part No.	Item Description
1	3 GE CDU ASSY	Cup Drop Unit Assembly
	PH10020000	Turret Extrusion
	PH10020001	Turret Extrusion (post serial no. starting 1634...)
	PL10985000 *	Turret Lid (post serial no. starting 1634...)
2	PL10019000	Turret Spigot
3	PL10015000	Top Moulding
4	ME10067000	Magnetic Catch
5	EL10038000	PCB Cup Detector
6	PL10018000	Microswitch Arm Moulding
7	EL04920000	Micro Switch
8	PL10016000	CDU Moulding
9	FA10204000	Spirol Pin, M4 x 14 mm
10	FA10205000	Screw, M3 x 10
11	ME05208000	Spring
12	FA03217000	Screw, M4 x 10
13	ME10201000	Spacer
14	FA01554000	Shakeproof Washer, M4
15	FA01506000	Locknut, M4
16	MT10066000	Bracket
17	FA10203000	Nyloc Nut, M3
18	PA10262000	Cup Splitter Assembly
19	PL10017000	Bottom Moulding
20	FA10202000	Screw, M3.5 x 20
21	MO10149000	Turret Motor, 1.7 rpm (obsolete part, replaced by 2.2 rpm motor)
	MO10885000	Turret Motor, 2.2 rpm
22	LO10114000	Loom
23	EL10038000	PCB Cup Detector
24	EL10037000	Solenoid
25	FA02155000	Screw, M5 x 12
26	FA02142000	Shakeproof Washer, M5
27	FA10206000	Shakeproof Washer, M3
	* not illustrated	

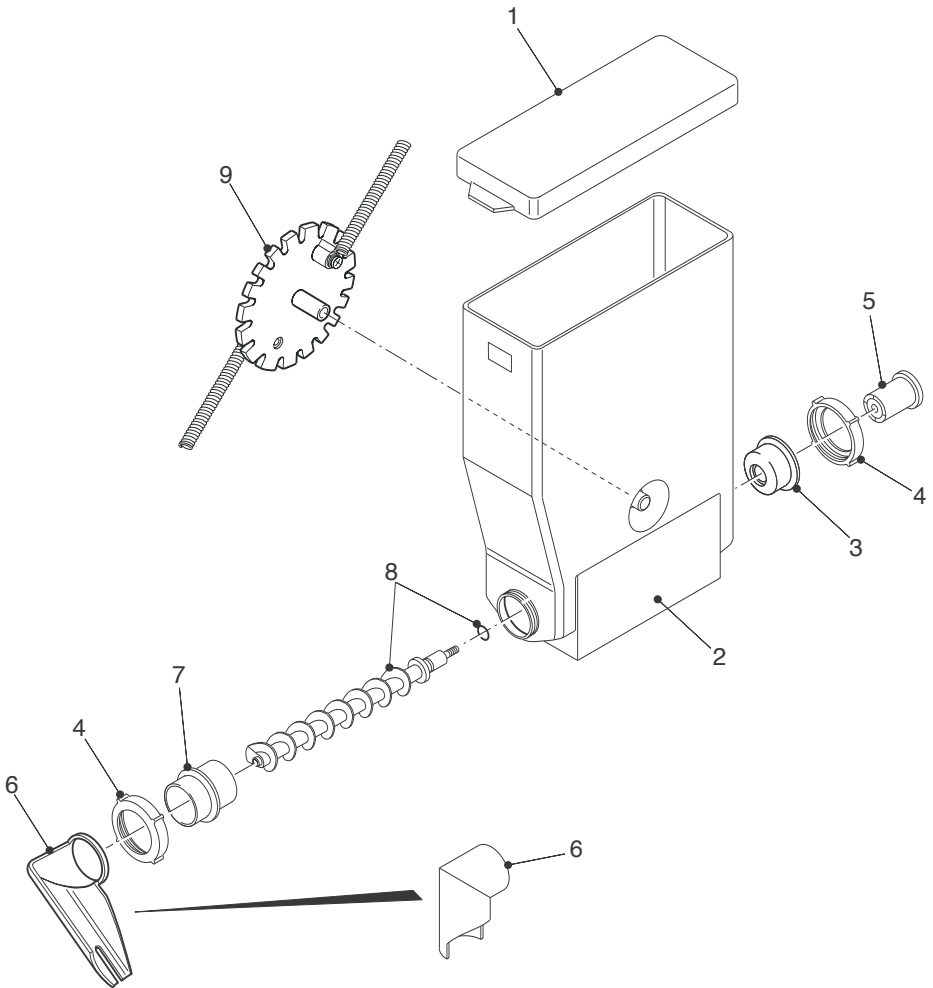
## Tall Canister Assembly



## Tall Canister Assembly

Ref. No.	Part No.	Item Description
	PL10153000	Canister Assembly - c/w Agitator
	PL10154000	Canister Assembly - No Agitator
	PL11126000 *	Narrow Canister Assembly - c/w Agitator
	PL11127000 *	Narrow Canister Assembly - No Agitator
1	(a) PL07138000	Canister Lid
	(b) PL11636000 *	Canister Lid - Narrow
2	(a) PL10390000	Canister Base
	(b) PL11637000 *	Canister Base - Narrow
3	PL10358000	Flange - Rear
4	PL10356000	End Cap
5	PL02711000	Canister Drive
6	PL01442000	Canister Chute, RH - Long
7	PL01441000	Canister Chute, LH - Long
8	PL01128000	Canister Chute - Central
9	PL10357000	Flange - Front
10	(a) ME02706000	Auger c/w 'O' Ring
	(b) SI02705000	'O' Ring
11	ME10388000	Agitator Assembly (obsolete part)
	PL02707000	Agitator Assembly
	* not illustrated	

## Short Canister Assembly

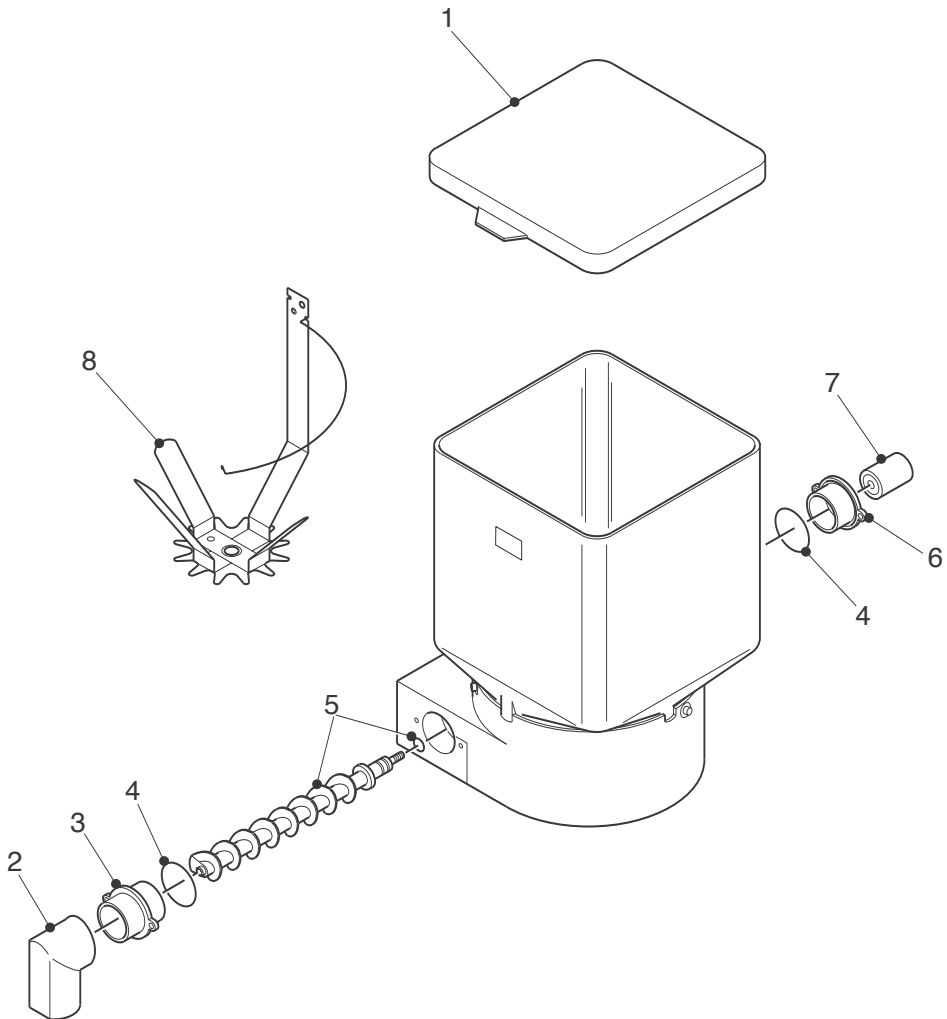


## Short Canister Assembly

Ref. No.	Part No.	Item Description
	PL10155000	Canister Assembly - Freshbrew Tea
	PL10549000	Canister Assembly - Freshbrew Coffee *
	PL11128000	Canister Assembly - Teapot *
1	(a) PL07138000	Canister Lid
	(b) PL02528001	Canister Lid - Wide *
2	(a) PL10390000	Canister Base
	(b) PL02703000	Canister Base - Wide *
3	PL10358000	Flange - Rear
4	PL10356000	End Cap
5	PL02711000	Canister Drive
6	(a) PL10297000	Extended Chute - Tea Canister
	(b) PL01441000	Canister Chute - Coffee Canister
	(c) PL11129000	Vented Canister Chute - Teapot
7	PL10357000	Flange - Front
8	(a) ME02706000	Auger, Plastic c/w 'O' Ring
	(b) ME10386000	Auger, Steel c/w 'O' Ring *
	(c) SI02705000	'O' Ring
9	ME10388000	Agitator Assembly (obsolete part)
	PL02707000	Agitator Assembly

\* Fitted to B2C machines

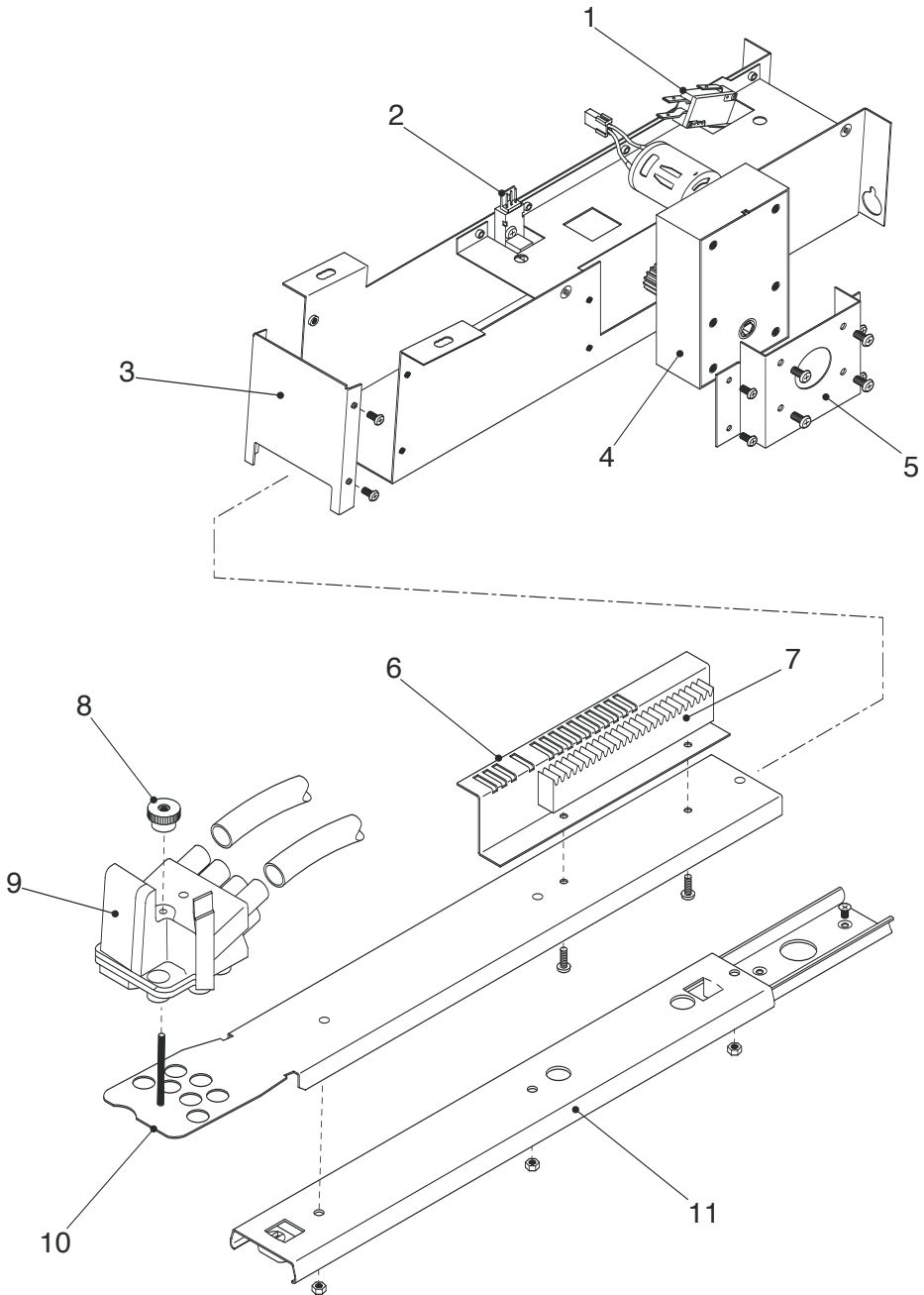
## Coffee Canister Assembly (Freshbrew Machines)



## Coffee Canister Assembly (Freshbrew Machines)

Ref. No.	Part No.	Item Description
	PL10156000	Freshbrew Canister Assembly
1	PL07137000	Canister Lid
2	PL01128000	Canister Chute - Central
3	PL02709000	Flange - Front
4	SI04697000	'O' Ring
5	ME10386000	Auger c/w 'O' Ring
6	PL02710000	Flange - Rear
7	PL02711000	Canister Drive
8	ME10387000	Agitator Assembly

## Dispense Head Assembly





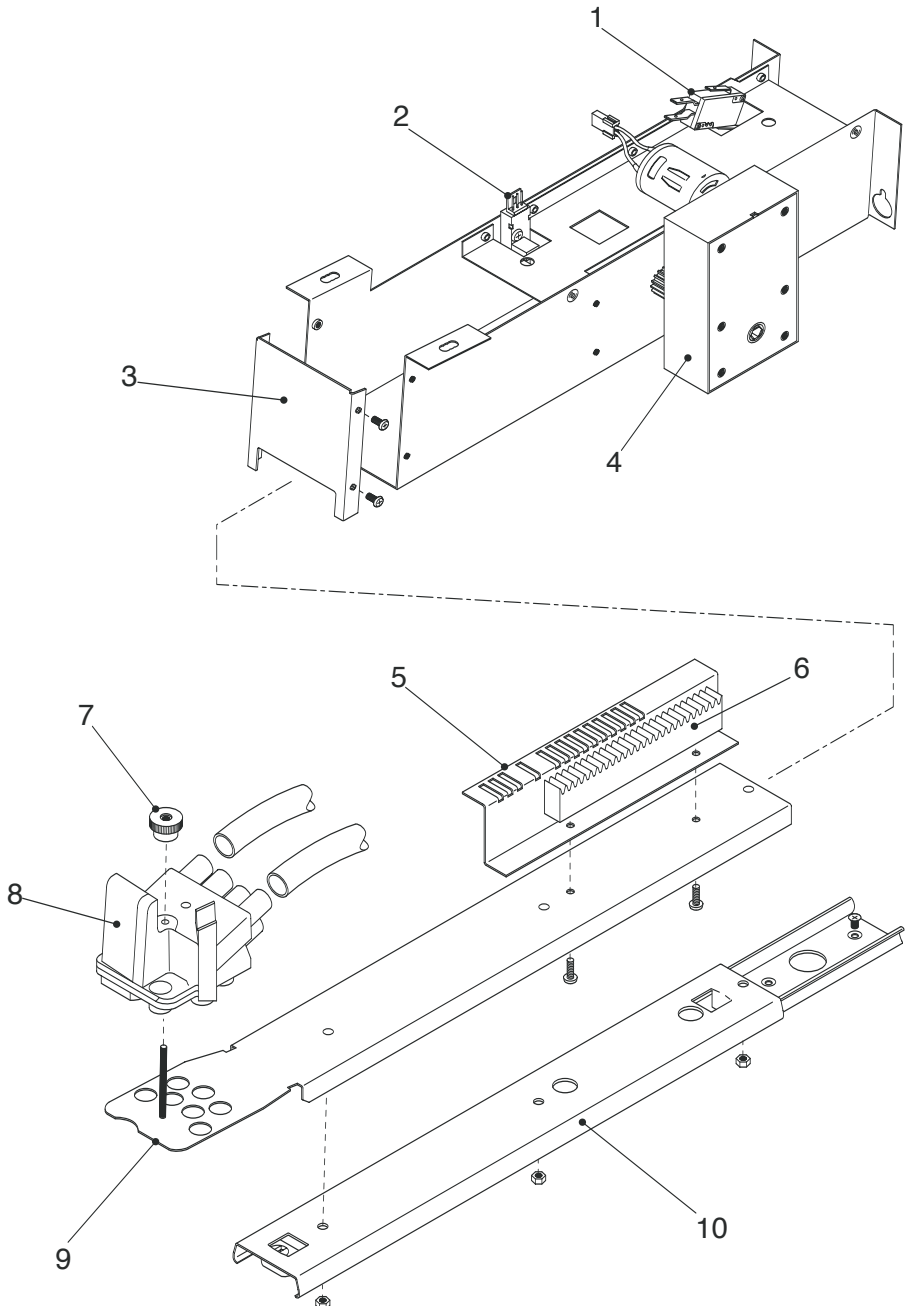
## Dispense Head Assembly

Pre serial numbers up to starting 1634.....

Ref. No.	Part No.	Item Description
	3 GE DISP HEAD	Dispense Head Assembly
1	EL04920000	Micro Switch
2	EL10036000	Dispense Head Opto Sensor
3	MT10099000	Cover Plate
4	MO10150000	Motor, 24v DC, 50rpm c/w Drive Pinion
5	MT10098000	Motor Bracket
6	MT10101000	Decoder Bracket
7	PL10035000	Rack Moulding
8	FA01416000	Knurled Thumb Nut, M5
9	PL05496000	Dispense Head Moulding
	PH05501000 *	Nozzle Set c/w Hot Water Nozzle
10	MT10100000	Dispense Head Arm
11	ME04063000	Dispense Head Slide

\* Not Illustrated

## Dispense Head Assembly

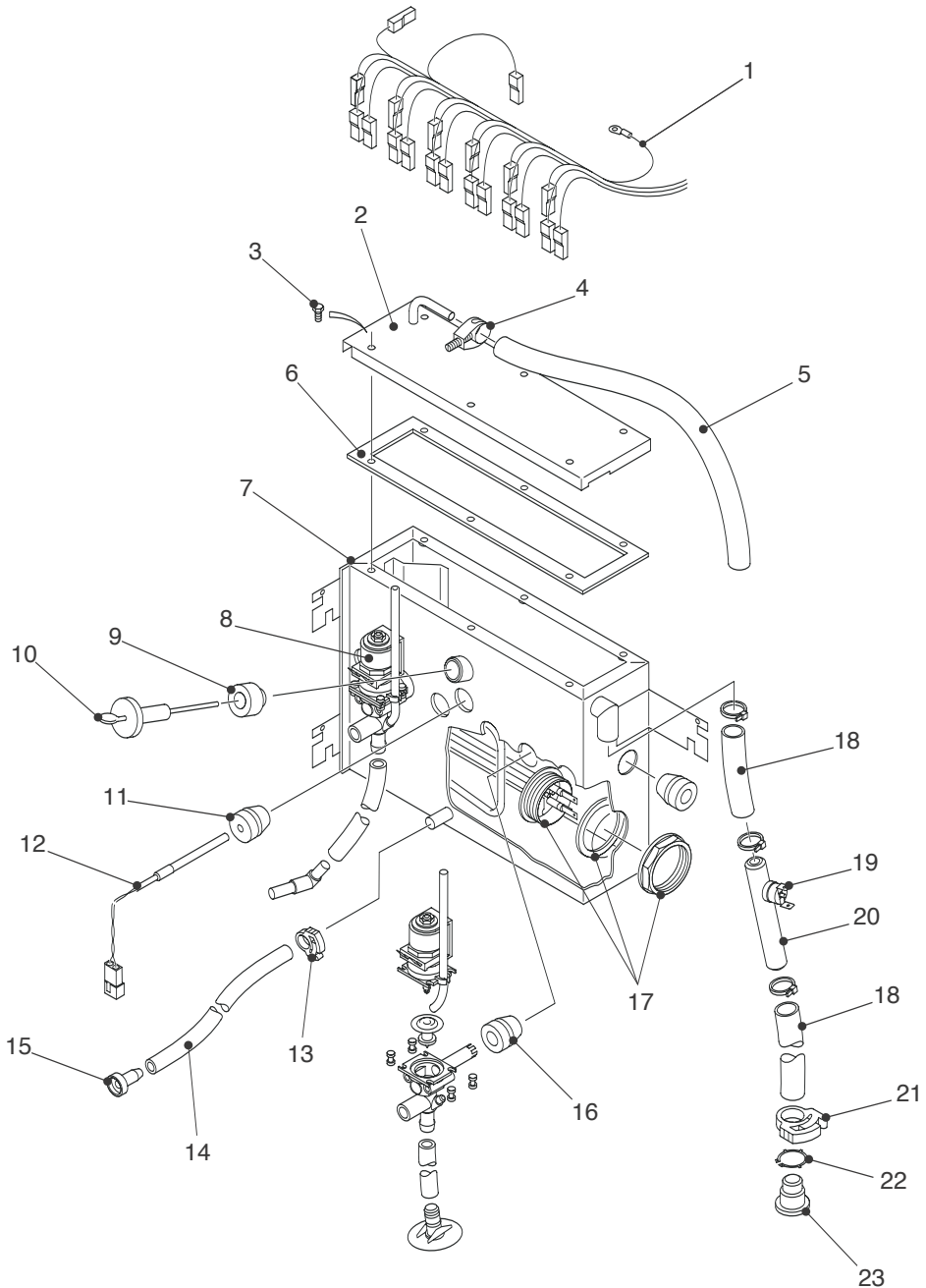


## Dispense Head Assembly

Post serial numbers from starting 1634.....

Ref. No.	Part No.	Item Description
	3 GE DISP HEAD	Dispense Head Assembly
1	EL04920000	Micro Switch
2	EL10036000	Dispense Head Opto Sensor
3	MT10099000	Cover Plate
4	MO10794000	Motor, 24v DC, 50rpm c/w Drive Pinion
5	MT10101000	Decoder Bracket
6	PL10035000	Rack Moulding
7	FA01416000	Knurled Thumb Nut, M5
8	PL05496000	Dispense Head Moulding
	PH05501000 *	Nozzle Set c/w Hot Water Nozzle
9	MT10100000	Dispense Head Arm
10	ME04063000	Dispense Head Slide
	* Not Illustrated	

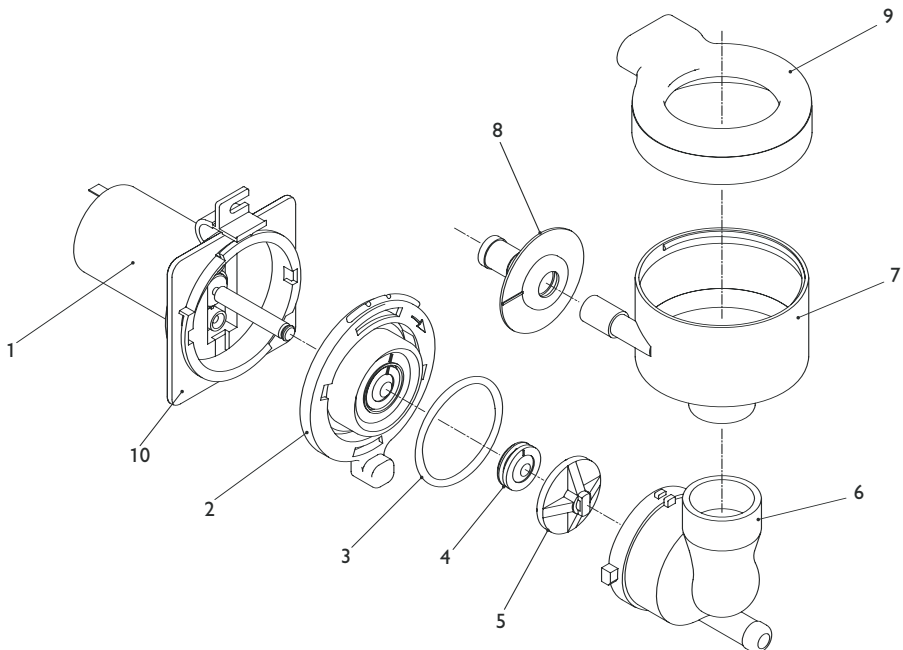
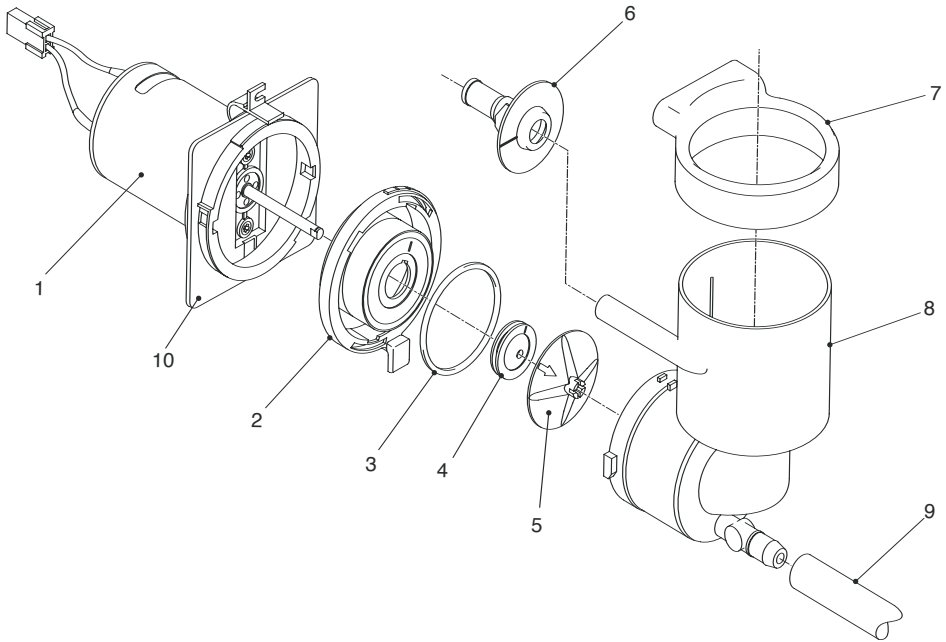
## Boiler Assembly (Instant/Freshbrew Machines)



## Boiler Assembly (Instant/Freshbrew Machines)

Ref. No.	Part No.	Item Description
1	LO10111001	Main Loom
2	MT10054000	Boiler Lid
3	FA01143000	Screw, M4 x 10
4	FA03227000	Unex Clip - 19mm
5	HO06632000	Inlet Hose
6	SI10056000	Boiler Seal
7	BA10050000	Boiler Assembly c/w Lid and Seal
8	VA10148000	Dispense Valve, 24v DC
9	VA01141000	Level Probe Seal
10	ME04550000	Level Probe
11	SI06340000	Thermistor Seal
12	PH03112000	Thermistor Assembly
13	FA01185000	Snapper Clip, 30
14	SI01171960	Silicone Pipe - 8mm i.d.
15	PL00718000	Drain Pipe Bung
16	VA03377000	Dispense Valve Seal
17	EL02876003	Element - 2375w
18	SI01142960	Silicone Pipe - 12mm i.d.
19	EL03378000	Temperature Cut Out
20	ME00043001	Temperature Cut Out Holder
21	FA01186000	Snapper Clip, 38mm
22	FA01135000	Circlip
23	PL00066000	Bowl Adaptor

## Mixing System & Hygiene Kit



## Mixing System & Hygiene Kit

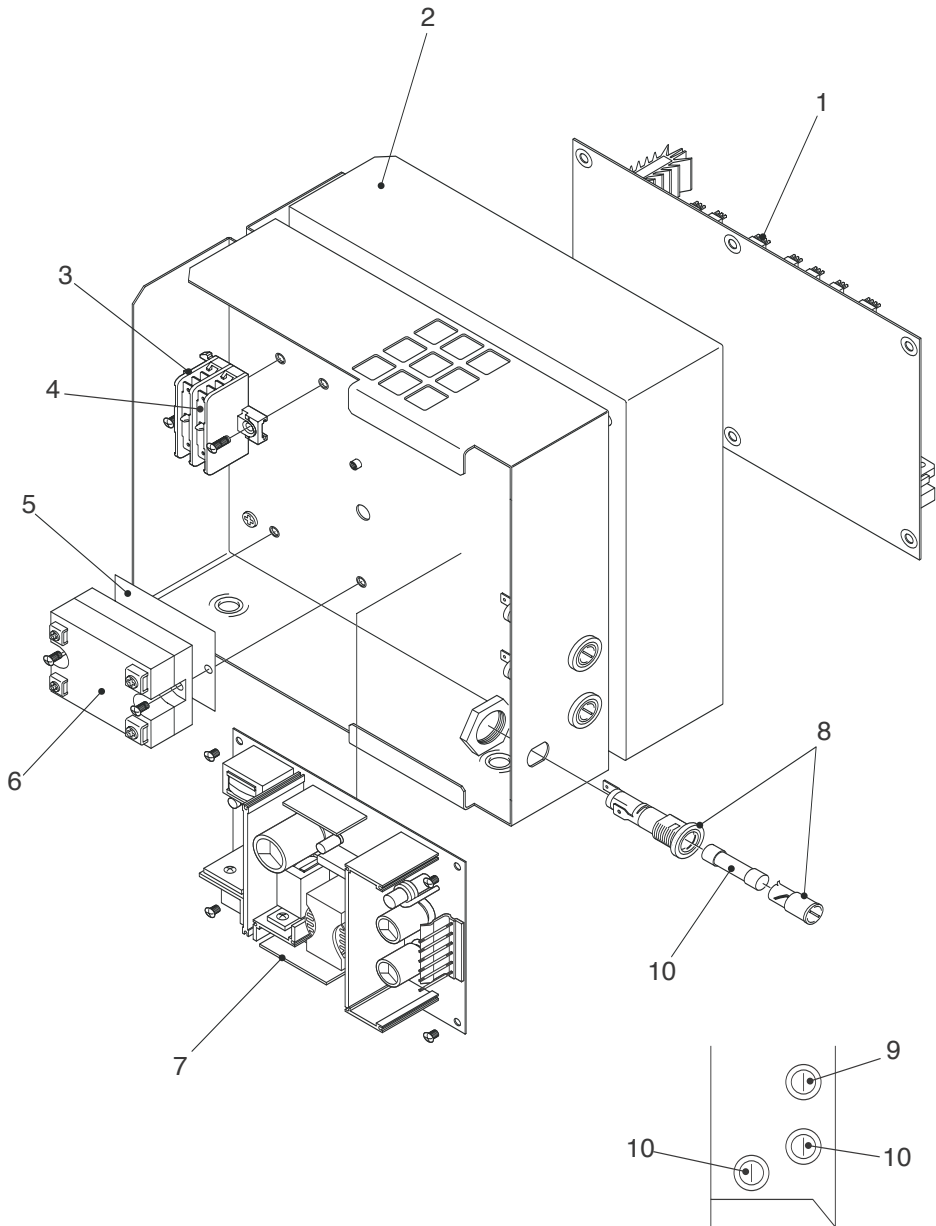
### Pre serial numbers up to starting 1634.....

Ref. No.	Part No.	Item Description
1	MO10184000	Whipper Motor c/w Fixing Plate
2	PL10188000	Whipper Base
3	SI10343000	Whipper Base 'O' Ring
4	SI10344000	Whipper Base Seal
5	PL10185000	Impeller
6	PL10183000	Bowl Adaptor
7	PL10187000	Steam Trap
8	PL10186000	Mixing Bowl Chamber
9	SI04345960	Silicone Pipe - 10mm o.d.
10	PL10802000	Fixing Plate - Whipper Motor Hygiene Kit *
	1GHYG INSTANT	Instant
	1GHYG FBREW	Freshbrew
	1GHYG BEAN2CUP	B2C
		* not illustrated

### Post serial numbers from starting 1634.....

Ref. No.	Part No.	Item Description
1	MO10991000	Whipper Motor c/w Fixing Plate
2	PL10188000	Whipper Base
3	SI10343000	Whipper Base 'O' Ring
4	SI10344000	Whipper Base Seal
5	PL01970000	Impeller
6	PL10992000	Whipper Body
7	PL01967000	Mixing Bowl
8	PL10183000	Bowl Adaptor
9	PL10187000	Steam Trap
10	PL10802000	Fixing Plate - Whipper Motor Hygiene Kit *
	1GHYG INSTANT 2	Instant
	1GHYG FBREW 2	Freshbrew
	1GHYG B2C 2	B2C
		* not illustrated

## Power Supply Assembly

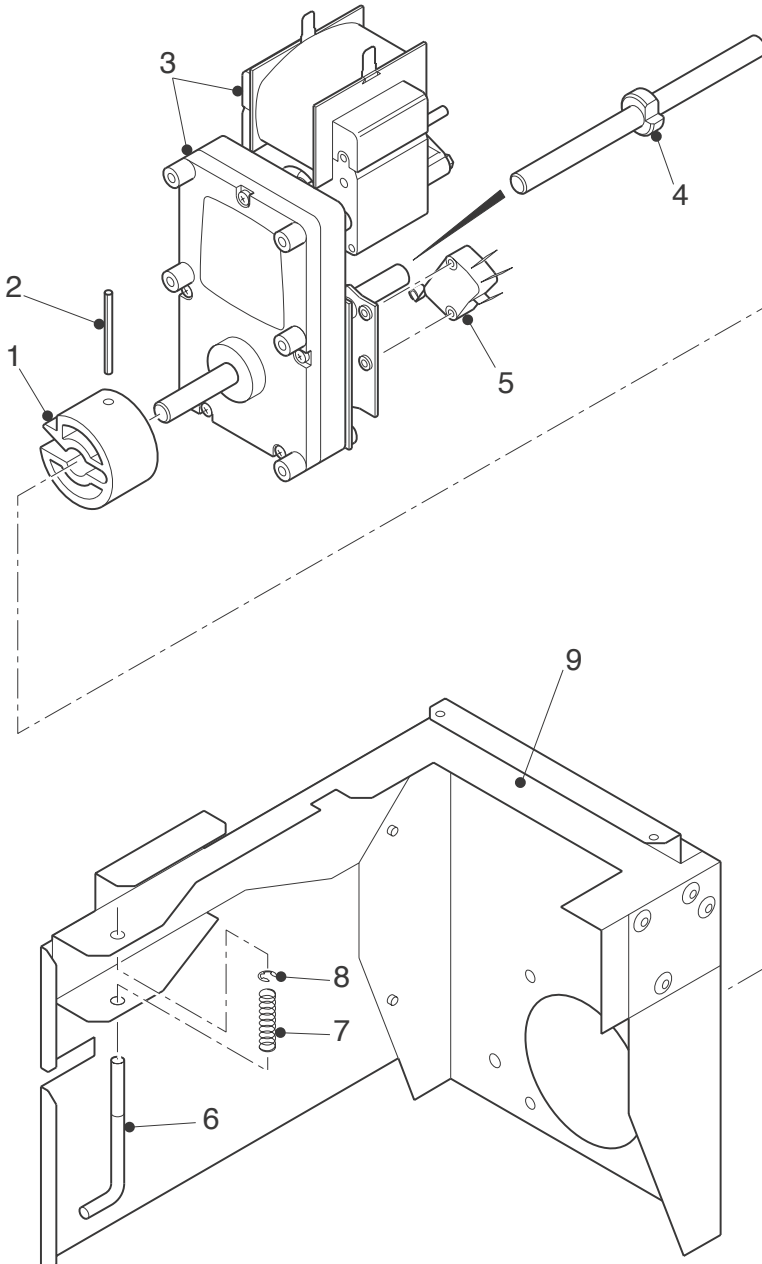




## Power Supply Assembly

Ref. No.	Part No.	Item Description
1	(a) EL08977000	Genesis I/O PCB - Instant/Freshbrew
	(b) EL10146000	Genesis I/O PCB - B2C
	(c) EL11361000	Genesis I/O PCB - B2C & Teapot (supersedes item 1(b) for all B2C machines)
	MT10788000 *	PSU Cover
2	MA10252000	Power Supply Chassis
	MA10546000	Power Supply Chassis (B2C & B2C + teapot machines only)
3	EL10193000	Connector Block
4	EL10194000	End Plate
5	EL01815000	Thermal Pad
		Items 3,4,5 are obsolete from serial no. 1634...
6	EL01152000	Solid State Relay
	EL01152001	Solid State Relay (post serial no. starting 1634....)
7	EL10021000	Switch Mode Power Supply
8	EL01994000	Fuse Holder Assembly
9	EL01995000	Fuse - 12A, 250v
10	EL01227000	Fuse - 4A, Anti-surge
	LO10112000 *	Power Supply Loom
	* not illustrated	

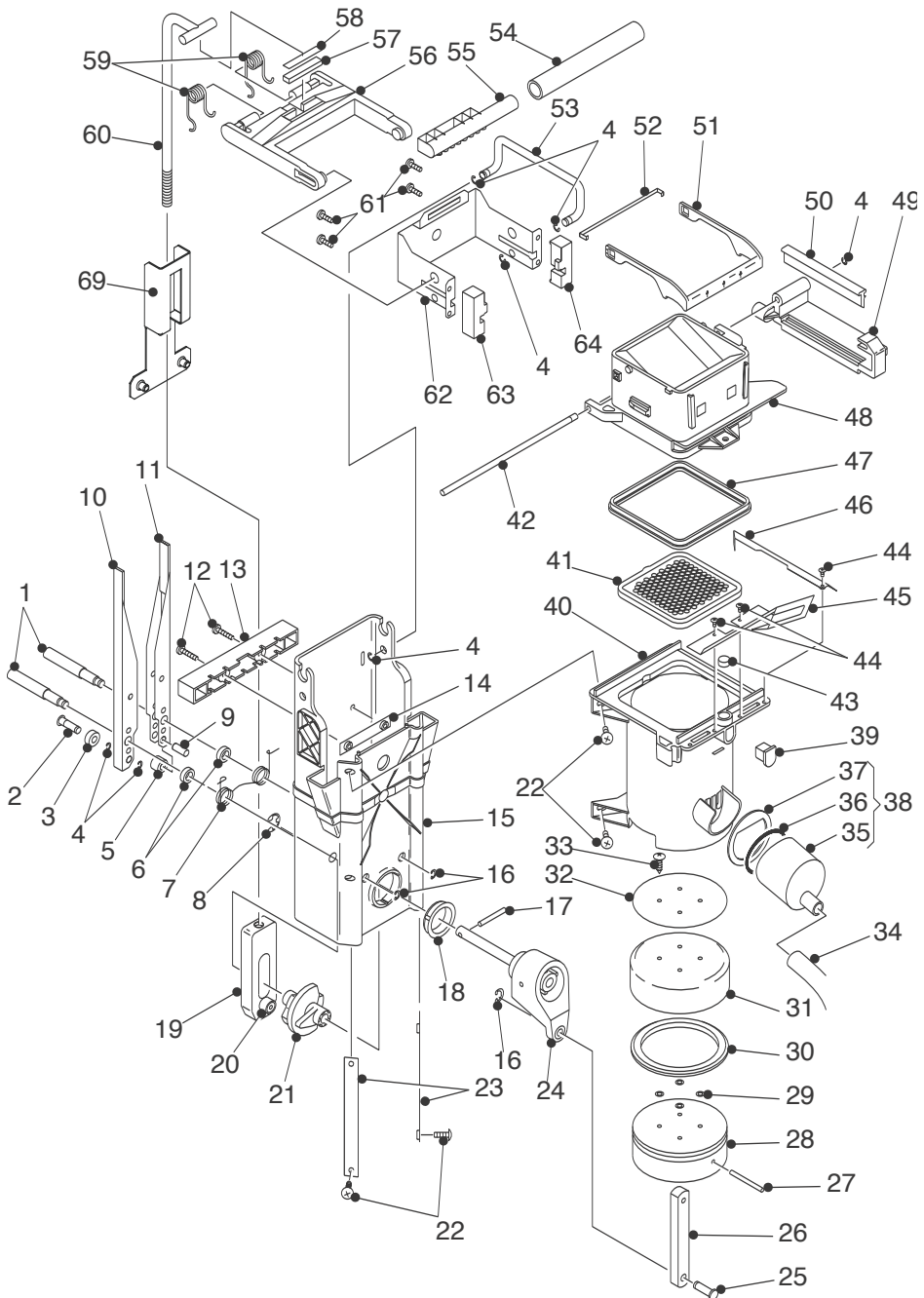
## Brewer Motor Assembly (Freshbrew Machines)



## Brewer Motor Assembly (Freshbrew Machines)

Ref. No.	Part No.	Item Description
	PH10023001	Brewer Motor Assembly - includes items 1,2,3
1	PL03297000	Drive Dog
2	ME08734000	Roll Pin - 36 x 3mm
3	MO10023000	Freshbrew Motor
4	ME00979000	Cam c/w Grub Screw
5	EL01148000	Micro Switch
6	ME04926001	Brewer Retaining Pin
7	ME01162000	Spring
8	FA01136000	'E' Clip
9	MT06562000	Mounting Bracket - Brewer

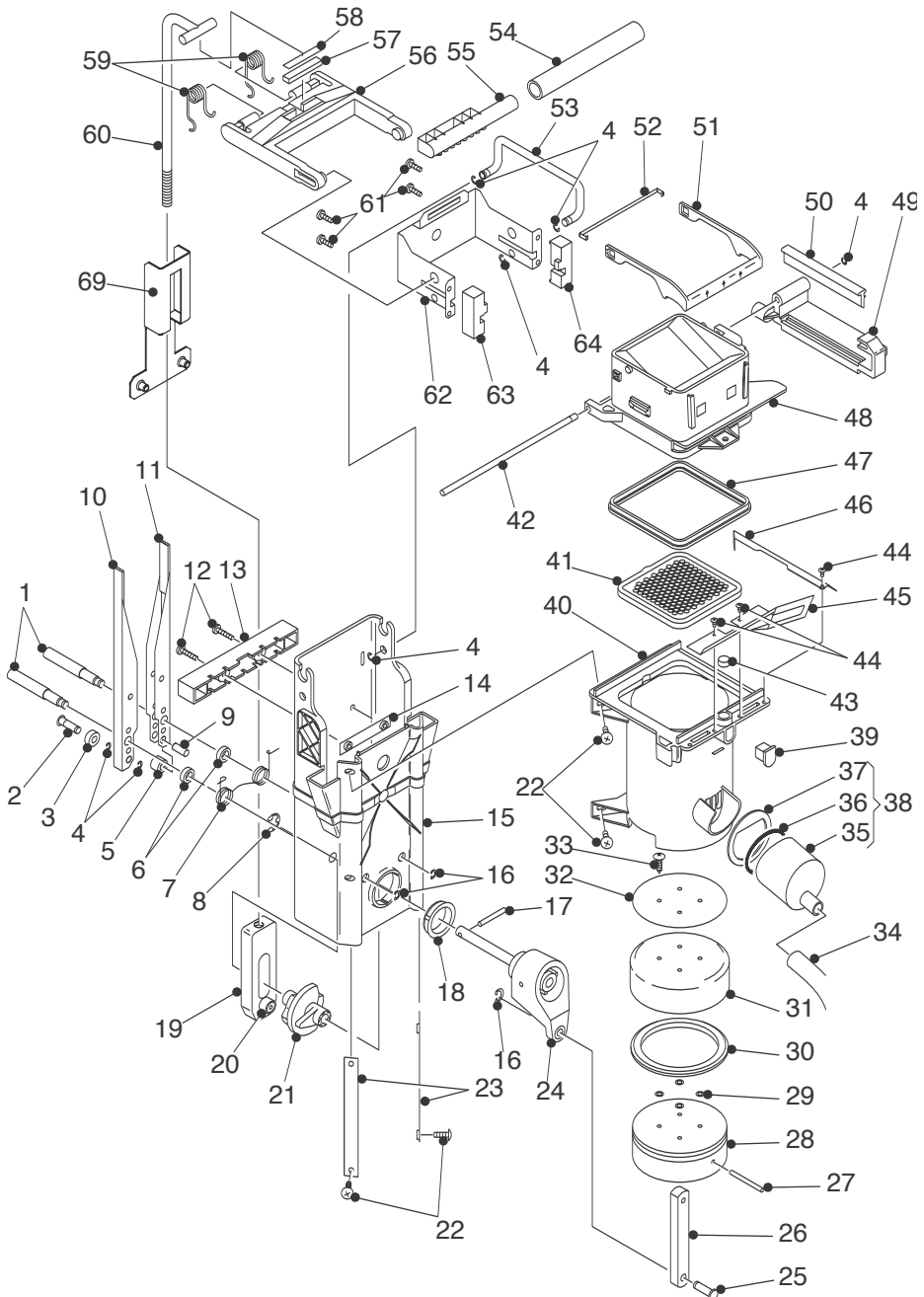
## Brewer Assembly (Zuma)



## Brewer Assembly (Zuma)

Ref. No.	Part No.	Item Description
	ME07000000	Brewer Complete - Single Chamber
	ME10022000 *	Brewer Complete - Dual Chamber
1	ME07448000	Wiper Arm Shaft
2	ME07449000	Wiper Arm Pin
3	ME07450000	Bearing
4	FA07668000	Retaining Ring
5	ME07451000	Roller
6	ME07452000	Wiper Arm Spacer
7	ME07453000	Wiper Arm Spring
8	FA07149000	Retaining Ring
9	ME07454000	Unwipe Arm Pin
10	ME07455000	Wiper Arm
11	ME07456000	Unwipe Arm
12	FA07669000	Screw, $\frac{8}{32} \times \frac{3}{4}$
13	ME07457000	Support Bracket - Rear
14	ME07458000	Support Plate
15	ME07459000	Mainframe
16	FA07670000	Retaining Ring
17	ME03955000	Spring Pin - $\frac{3}{16} \times 1 \frac{1}{4}$
18	ME07460000	Bearing Crank Arm
19	ME07245000	Housing c/w Bearing
20	ME03962000	Bearing
21	ME07461000	Cam
22	ME06140000	Screw
23	ME07462000	Brewer Chamber Retaining Plate
24	ME07463000	Crank Arm Assembly
25	ME07671000	Crank Arm Pin
26	ME07464000	Connecting Rod
27	FA08311000	Spring Pin
28	ME07465000	Piston
29	S107672000	'O' Ring
30	SI07466000	Rubber Seal
31	ME07673000	Teflon Seal

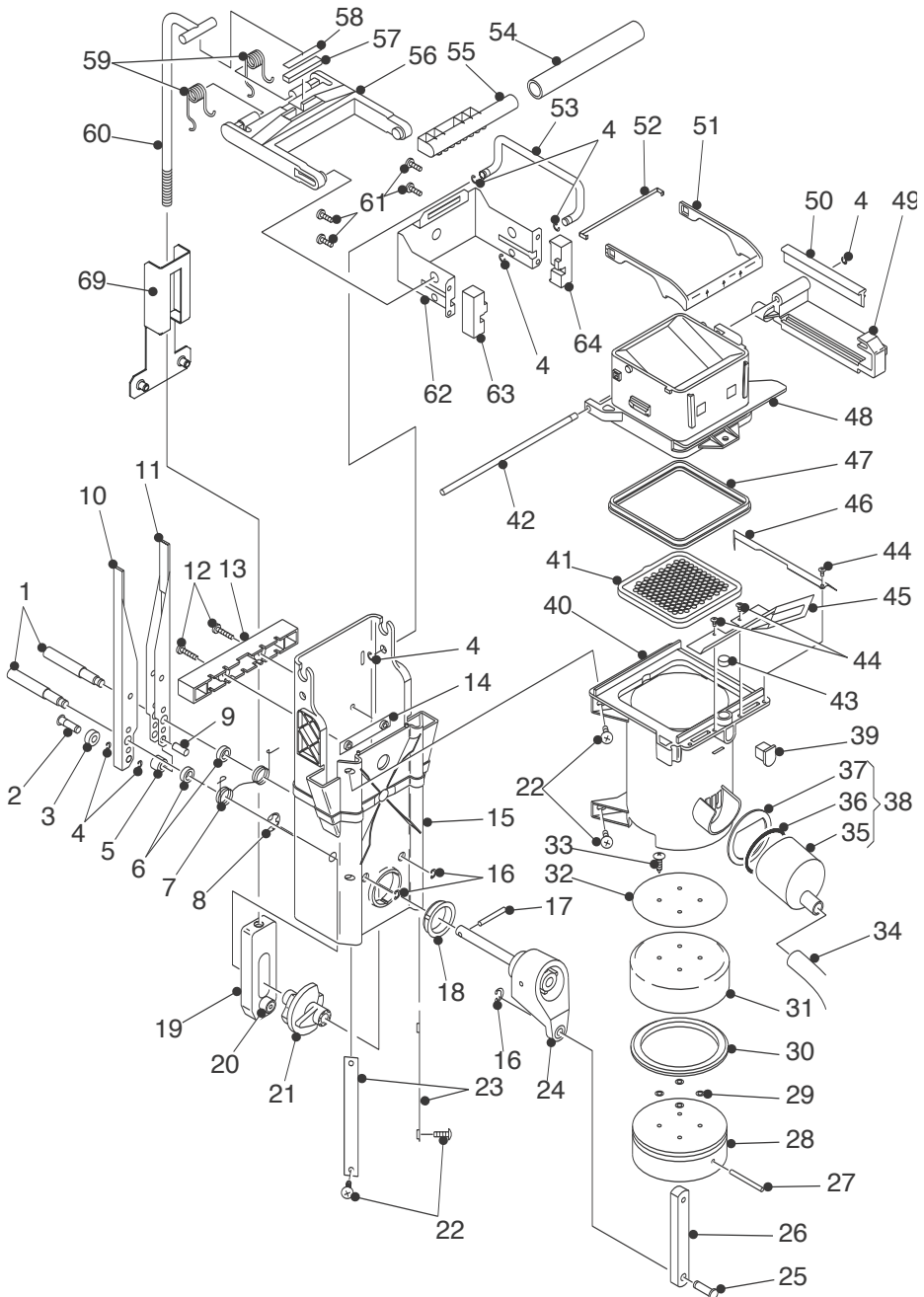
## Brewer Assembly (Zuma)



## Brewer Assembly (Zuma)

Ref. No.	Part No.	Item Description
32	ME07467000	Piston Top Plate
33	FA07674000	Screw
34	SI01171960	Silicone Pipe
35	PL06075001	Outlet Adaptor
36	FA01216000	'O' Ring - Outlet
37	SI06077000	Outlet Adaptor Seal
38	SA06075000	Outlet Adaptor Assembly
39	ME08285000	Brewer Chamber Vent Plug
40	PL07675000	Brewer Chamber
41	PL07155000	Mesh Filter - Single Brewer
42	ME07148000	Pin
43	SI07468000	Vent Seal
44	FA07676000	Screw
45	ME07469000	Deflector - Front
46	ME07470000	Deflector - Side
47	(a) SI07150000	Brewer Seal - Single Brewer
	(b) SI10373000 *	Coffee Seal - Dual Brewer
	(c) SI10372000 *	Tea Seal - Dual Brewer
48	(a) PL07677000	Brewer Chamber - Single Brewer
	(b) PL10375000 *	Brewer Chamber - Dual Brewer
49	(a) PL07678000	Wiper Carriage - Single Brewer
	(b) PL10377000 *	Wiper Carriage - Dual Brewer
50	(a) SI07152000	Wiper - Coffee - Single Brewer
	(b) SI10374000 *	Wiper - Tea - Dual Brewer
51	PL07154000	Latch
52	ME07471000	Spring Clip - Latch
53	(a) ME07472000	Bar - Single Brewer
	(b) ME10379000 *	Bar - RH - Dual Brewer
	(c) ME10378000 *	Bar - LH - Dual Brewer
54	SI07642000	Silicone Pipe
55	PL07153000	Water Outlet Tube
56	ME07473000	'H' Frame
57	ME07474000	Spacer - Rubber
58	ME07679000	Shim
59	ME07475000	Spring

## Brewer Assembly (Zuma)

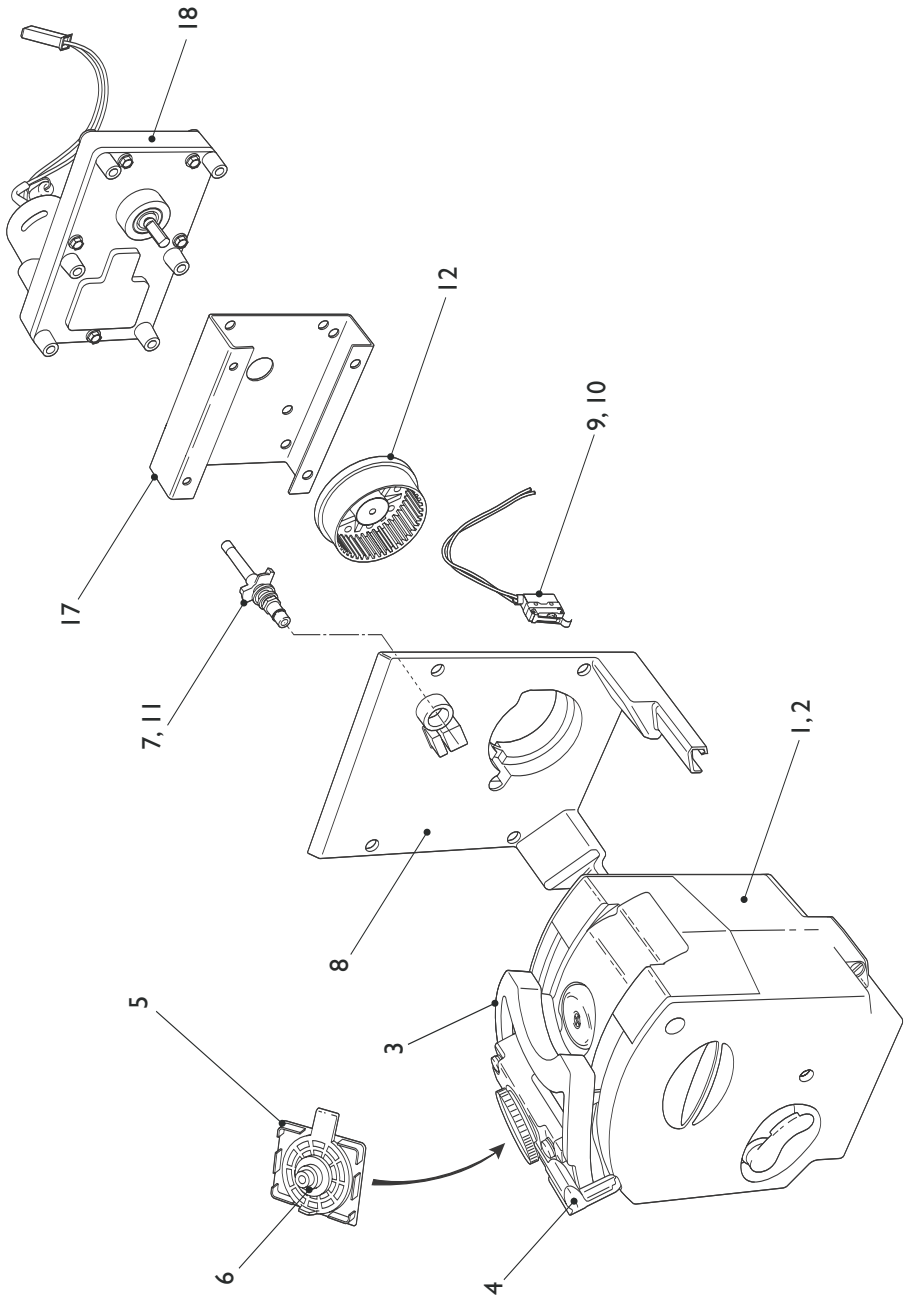




## Brewer Assembly (Zuma)

Ref. No.	Part No.	Item Description
60	ME07476000	Threaded Rod
61	FA07680000	Screw
62	ME07477000	Brewer Chamber Support Bracket
63	ME07478000	Latch Block - LH
64	ME07479000	Latch Block - RH
65	ME10497000 *	Tea Funnel Assy - Dual Brewer (includes item 66 & 67)
66	PL10376000 *	Funnel, Tea
67	ME10380000 *	Tea Filter Assembly - Dual Brewer (includes seals and mesh filter)
68	ME10496000 *	Dual Brewer Chamber Assembly (includes items 47 (b, c) and 48 (b))
69	MT11329000	Restraining Bracket - Threaded Rod
70	ME10385000 *	Filter Removal Tool
* not illustrated		

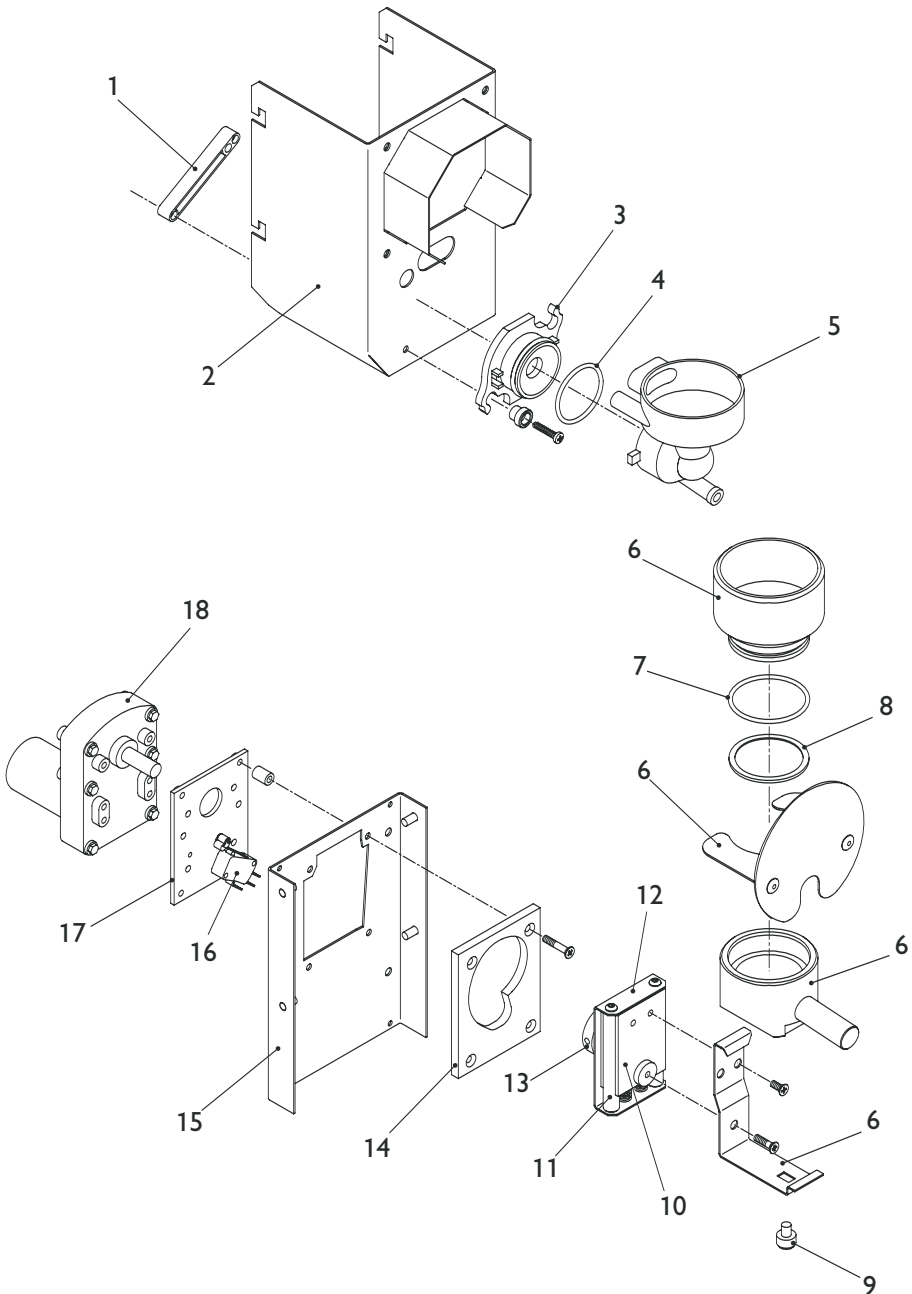
## CoEx® Brewer/Motor Assembly (B2C Machines)



## CoEx® Brewer/Motor Assembly (B2C Machines)

Ref. No.	Part No.	Item Description
1	ME10190000	Brewer Assembly (includes items 2, 3, 4, 5, 7, 8, 9, 10, 11, 12)
2	ME10599000	Brewer
3	PL11622000	Wiper Arm
4	PL10283000	Coffee Outlet Spout
5	ME10284000	Filter Head Assembly (includes item 6)
6	ME10596000	Quad Ring
7	ME10595000	'O' Ring - Water Inlet Connection
8	ME10762000	Mounting Bracket
9	EL10903000	Microswitch, c/w Lead
10	EL10587000	Lever, Microswitch
11	ME10763000	Water Inlet Connection
12	ME10597000	Drive Wheel
13	PH10820000 *	Service Kit (includes items 5, 7, 14, 15)
14	ME10592000 *	Lower Piston and Cylinder Assembly
15	ME07308000 *	Grinder Blades
16	PH10191000 *	Motor Assembly (includes items 12, 17, 18)
17	MT10135000	Motor Mounting Bracket
	MT10978000	Motor Mounting Bracket (post serial no. starting 1634...)
18	MO10191000	CoEx® Brewer Motor (pre serial no. starting 1718...)
	MO11679000	CoEx® Brewer Motor (new motor can only be used with software from version No. 01.05)
	ZC10598000 *	Cleaning tablets (x30)
	* not illustrated	

## Teapot Assembly (B2C & Teapot Machines)

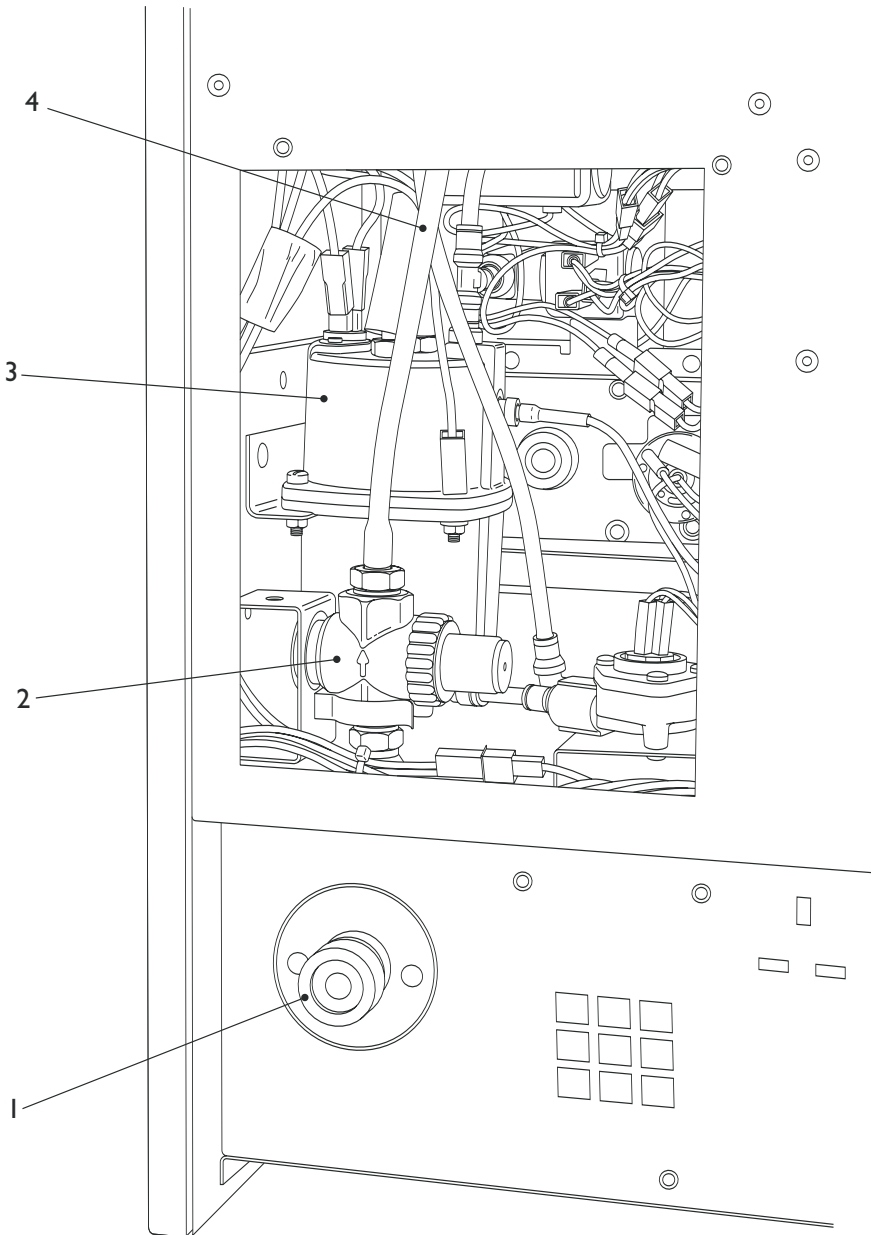


## Teapot Assembly (B2C & Teapot Machines)

Ref. No.	Part No.	Item Description
1	PL02278000	Fixing Strap
2	MT11124000	Teapot Cover
3	PL10766000	Whipper Base - Blind
4	SI10818000	'O' Ring
5	PL10767000	Mixing Bowl Chamber
6	PA10977000	Teapot Assembly c/w Mesh
7	SI01669000	'O' Ring
8	PL10975000	Filter Mesh
9	FA01855000	M8 Thumb Screw
10	ME00598000	Slider Block
11	ME00596000	Pivot Guide Pillar
12	ME05426000	Pivot Plate
13	ME00597000	Limit Switch Guide
14	ME00651000	Cam Plate
15	MT10757000	Mounting Plate
16	EL01148000	Micro Switch
17	MT00594000	Motor/Switch Mounting Plate
18	MO10764000	Teapot Motor

\* not illustrated

## Water Inlet/Pressure Valve Assembly (B2C Machines)

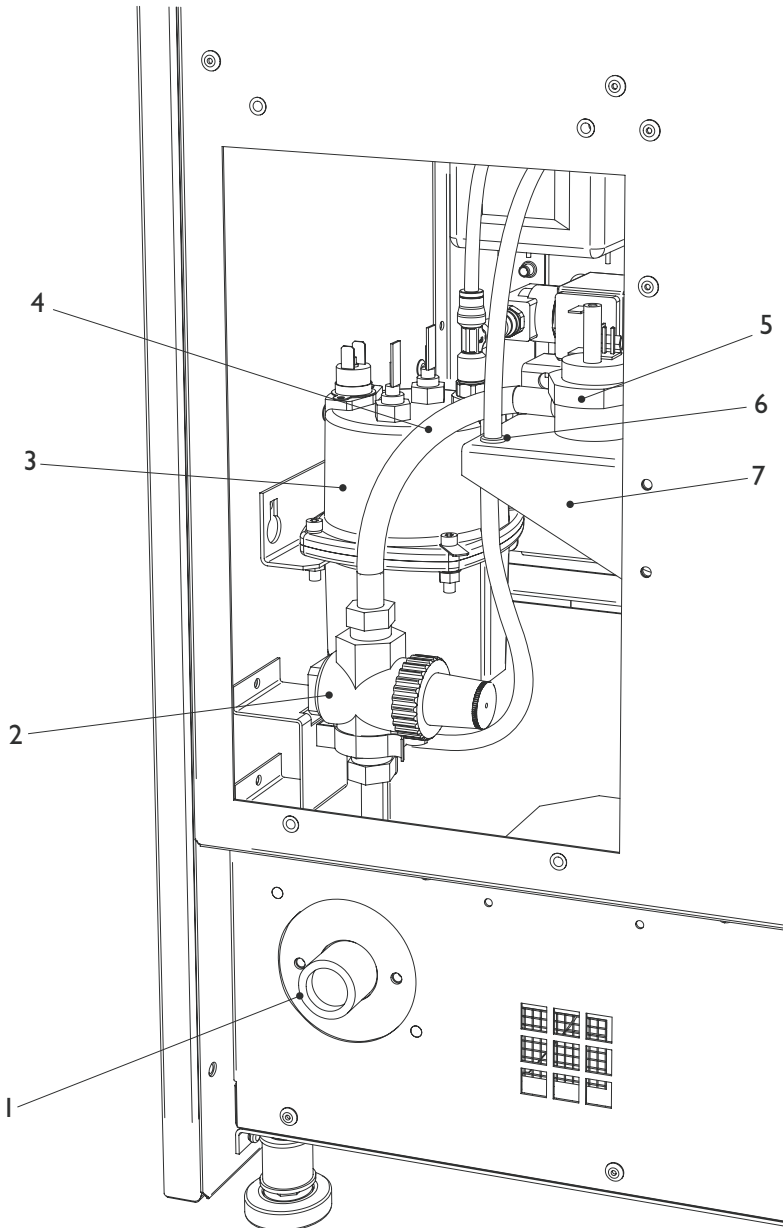


## Water Inlet/Pressure Valve Assembly (B2C Machines)

Pre serial numbers up to starting 1634.....

Ref. No.	Part No.	Item Description
1	VA10147000	Inlet Valve, 24v DC
2	VA10048000	Valve, Pressure Reducing
3		<a href="#">Boiler Assembly</a> (see page 193)
4	SI10538000	Silicone Tubing, 4mm i.d.
	MT10140000 *	Rear Cover Panel
	* not illustrated	

## Water Inlet/Pressure Valve Assembly (B2C Machines)





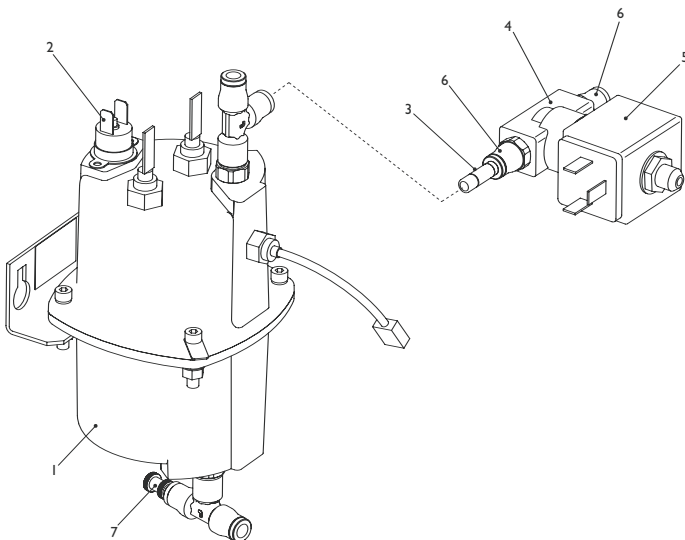
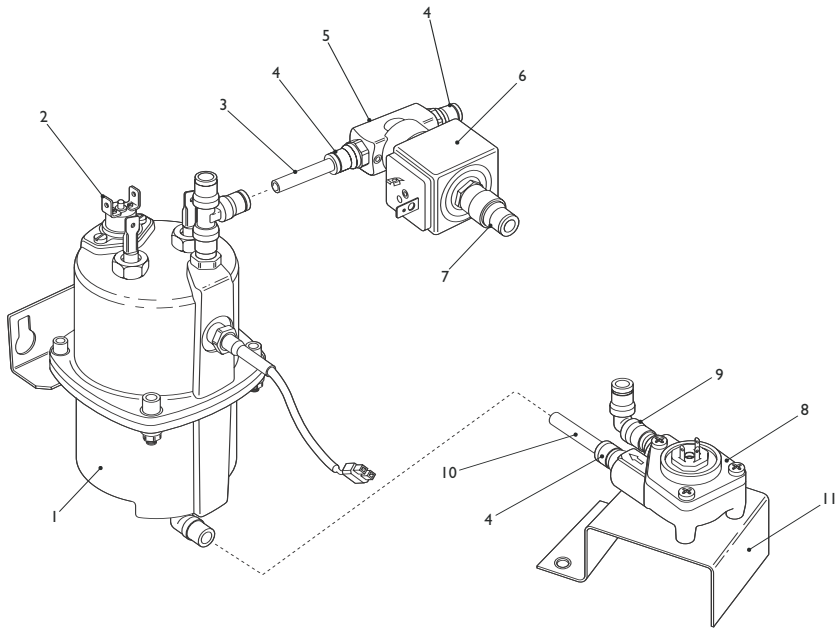
## Water Inlet/Pressure Valve Assembly (B2C Machines)

Post serial numbers from starting 1634.....

Ref. No.	Part No.	Item Description
1	VA10147000	Inlet Valve, 24v DC
2	VA10048000	Valve, Pressure Reducing
3		<a href="#">Boiler Assembly</a> (see page 193)
4	SI10538000	Silicone Tubing, 4mm i.d.
5	ME10834000	Flow Meter
6	FA05209000	Grommet, Red Silicone
7	MT11160000	Bracket, Flow Meter Mounting
	MT11067000 *	Rear Cover Panel

\* not illustrated

## Pressure Boiler Assembly (B2C Machines)



## Pressure Boiler Assembly (B2C Machines)

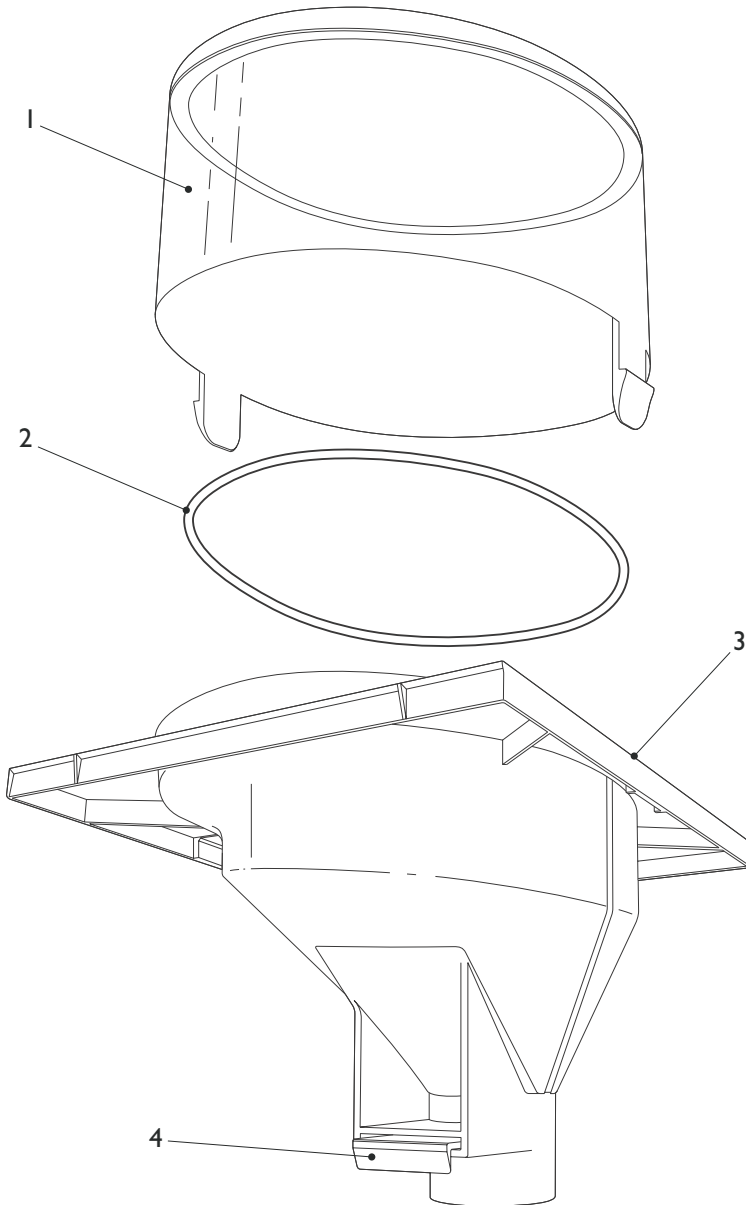
### Pre serial numbers up to starting 1634.....

Ref. No.	Part No.	Item Description
1	BA10000000	Pressure Boiler c/w 2kW Element
2	EL10226000	High Temperature Cut Out
3	ME10220000	Coupling, Double Male Stem
4	ME10218000	Coupling, Male
5	VA10535000	Valve Body, 3 Way
6	VA10536000	Valve Coil, 3 Way
7	ME10211000	Coupling, Female
8	ME10049000	Flow Meter
9	ME10217000	Coupling, Elbow
10	HO10245000	Tube
11	MT10463000	Bracket, Flow Meter

### Post serial numbers from starting 1634....

Ref. No.	Part No.	Item Description
1	BA10000000	Pressure Tank c/w 1.25kW Element and Blanking Plug, ME11186000
2	EL10226000	High Temperature Cut Out
3	ME1022000	Coupling, Double Male Stem
4	VA10535000	Valve Body, 3 Way
5	VA10536000	Valve Coil, 3 Way
6	ME10218000	Coupling, Male
7	ME11186000	Blanking Plug

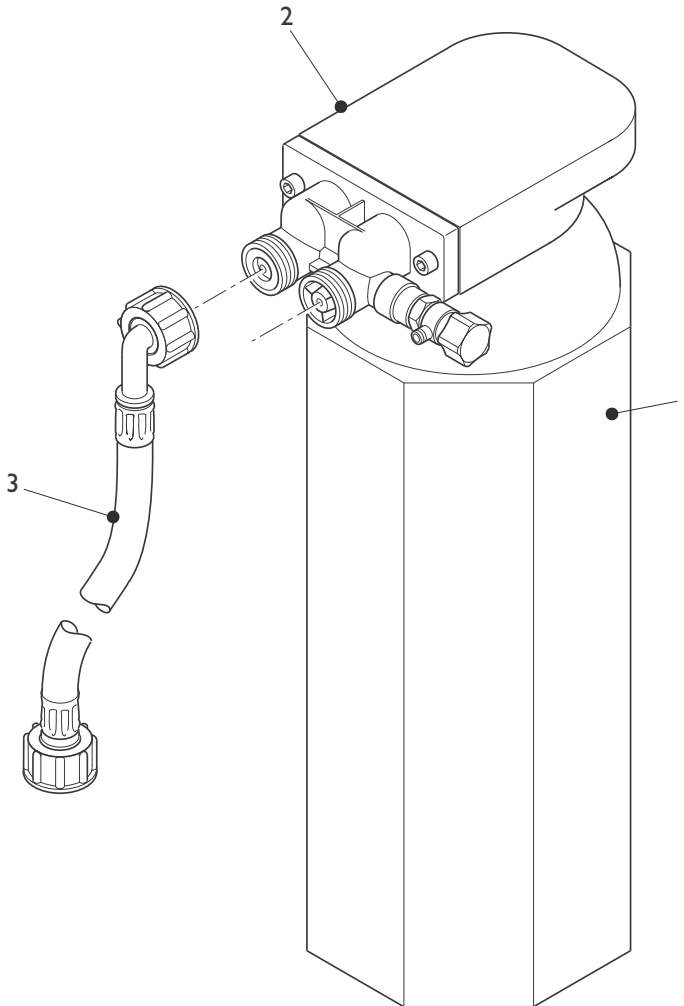
## Fresh Bean Container (B2C Machines)



## Fresh Bean Container (B2C Machines)

Ref. No.	Part No.	Item Description
1	PL10027000	Bean Container Lid
2	SI10548000	Bean Container Lid Seal
3	PL10026000	Fresh Beans Container
4	PL10028000	Bean Container Shut Off

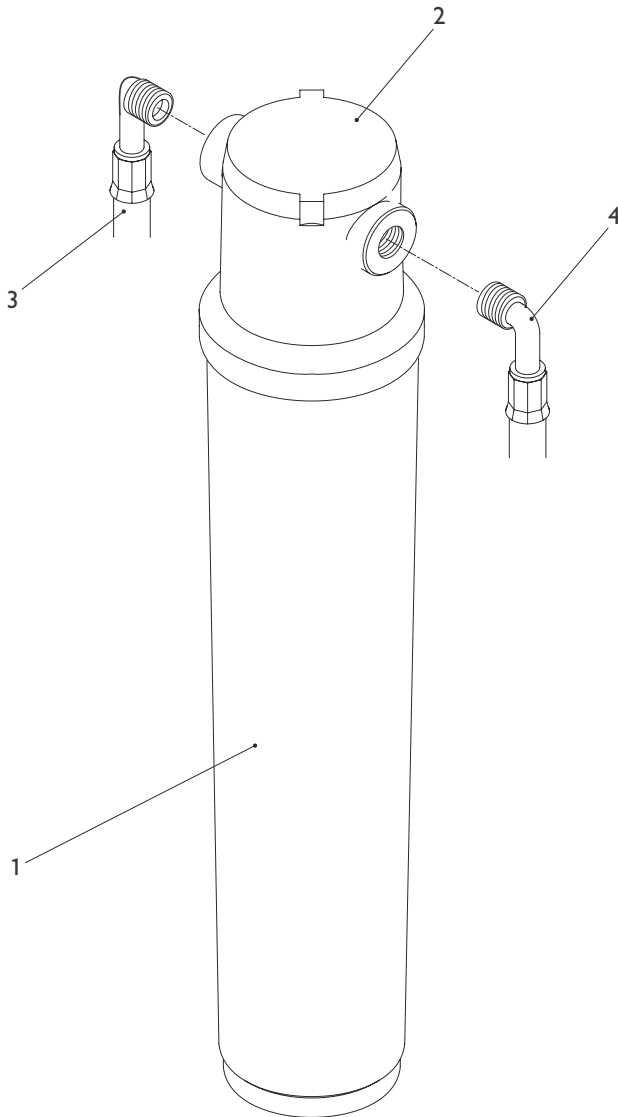
## Water Filter Assembly (Brita 'Aquaquell')



## Water Filter Assembly (Brita 'Aquaquell')

Ref. No.	Part No.	Item Description
	1 BRITA GENESIS	Filter Kit
1	WF04910000	Filter
2	WF04911000	Filter Head - Small
3	HO04446000	Hose

## Water Filter Assembly (Brita '06B')

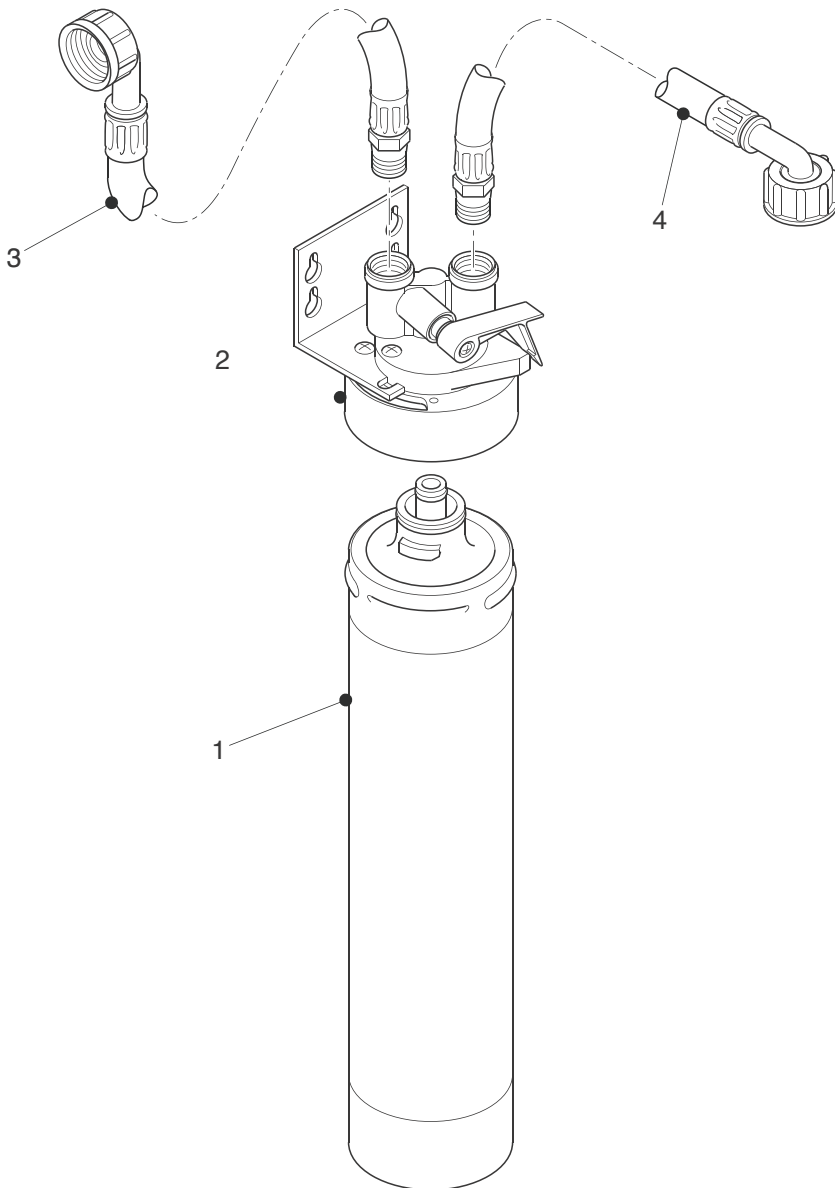




## Water Filter Assembly (Brita '06B')

Ref. No.	Part No.	Item Description
	1BRITA06BFILTER	Filter Kit, Aquavend 0-6B
1	WF07310000	Filter Cartridge
2	WF07309000	Filter Head Assembly - includes mounting bracket and screws
3	HO07498000	Hose, Inlet
4	HO07499000	Hose, Outlet

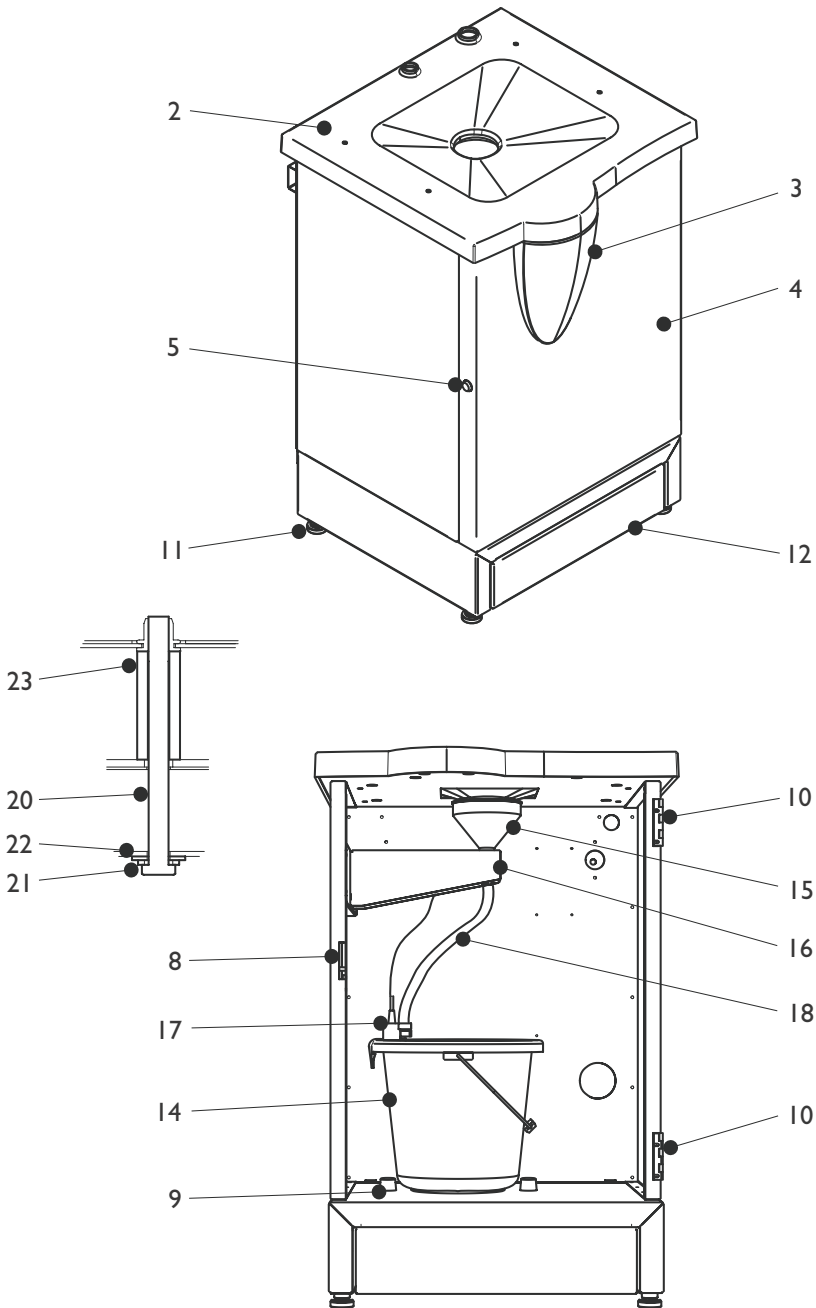
## Water Filter Assembly (Everpure)



## Water Filter Assembly (Everpure)

Ref. No.	Part No.	Item Description
	1 EPURECARTKIT	Filter Kit
1	WF03273000	Filter Cartridge
2	WF03116000	Filter Head Assembly - includes mounting bracket and screws
3	HO04074000	Hose, Inlet
4	HO4075000	Hose, Outlet

## Base Cabinet & Waste Equipment



## Base Cabinet & Waste Equipment

Ref. No.	Part No.	Item Description
1	(a) 1 BASE GE531	Base Cabinet -
	(b) 1 BASE GE531P	
	(c) 1 BASE GE534P	
	(d) 1 BASE GE107P	
	(e) 1 BASE GE531PZ	(US version)
2	PL10331000	Base Cab Top Moulding
3	PL10332000	Base Cab Door Moulding
4	MT10334000	Door, Base Cab
5	ME02857000	Lock
6	ME00933000*	Key 2101
7	MT06970000*	Door Cam Lock
8	MT10362000	Door Striker Plate
9	ME04280000	Door Stop Positioner
10	WO07022000	Hinge
11	ME10533000	Foot
12	MT05484000	Kick Plate
13	3 GE BASE PLB*	Plumb Kit (includes all parts for the base cabinet waste system, items 14 to 18)
14	PL01172000	Bucket - 10 litre
15	PL05177000	Funnel
16	MT10337000	Funnel Holder
17	WO05396000	Level Probe Assembly
18	SI01142960	Pipe
19		Fixing Kit - to secure the Genesis machine to the base cabinet (includes items 20 to 23)
20	FA07116000	Bolt - M6x100mm
21	FA03126000	Washer, Flat
22	FA01561000	Washer, Spring
23	FA07113000	Spacer
24	1 GE WASTE KIT*	Waste Kit (includes all parts for an under worktop waste system)

\* not illustrated



## Optional Payment System Equipment

Ref. No.	Part No.	Item Description
1	1 GE FV/JUG 00	Freevend M/C
2	1 GE FV/Jug 01	Payvend M/C
3	4 GE NFM 531	Platinum Coin Kit
4	4 GE WFM 531	Freevend to Payvend Kit (converts a freevend to a payment system)
5	ME10267000	Transformer (used with the Executive coin mechanism)
6	MT10371000	Mounting Bracket (for item 5)

## Notes







G · E · N · E · S · I · S

**CRANE** **MERCHANDISING SYSTEMS™**  
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for the Crane equipment range.